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THE JOURNAL OF PERIODONTOLOGY is published to serve as the professional journal of periodontia; to keep dentists in touch with research being carried on in this field and related sciences; to stimulate greater interest in the supporting tissues of the teeth and their relation to oral and general health. The plan to continue the publication of abstracts indefinitely will make the Journal a fund of extensive information, readily available to students, teachers, researchers and clinicians.

The Journal is the official organ of the American Academy of Periodontology and will contain therefore those papers of scientific interest which are presented at the annual meetings of that society. The proceedings of the 1935 annual meeting will be published in the January, 1936 issue. This number contains the abstracts of articles on periodontia which appeared during the year of 1934.

We are grateful to all who have made available the subject matter from which the abstracts and copies have been made, including the authors of the original articles, the journals mentioned in the text of the abstract section, and those who have aided in any way in compiling the material presented in this issue.

"Great causes are never tried on their merits, but the cause is reduced to particulars to suit the size of the partizans, and the contention is ever hottest on minor matters."

—Emerson.

THE JOURNAL OF PERIODONTOLOGY

JULY, NINETEEN HUNDRED THIRTY-FIVE

ABSTRACTS AND EXTRACTS OF CURRENT DENTAL LITERATURE FOR 1934 ON

Periodontal Histo-pathology, Periodontal Bacteriology, Other Laboratory Researches, Clinical Etiology, Symptomatology and Diagnosis, Treatment, Home Care and Prophylaxis, Vincent's Infection and Miscellaneous Subjects

(a) Periodontal Histo-pathology

(Continued from July, 1934 issue, page 113)

164—Bödecker, Charles F., D. D. S., and Applebaum, Edmund, D. D. S.: **The clinical importance of the gingival crevice,** in: D. Cosmos, 76(11): 1127-1143. Nov., 1934.

A review of work done on gingival crevice attachment and an original interpretation from a clinical viewpoint.

The old conception of the gingival relation to the tooth is that it is attached at the cemento-enamel junction, loosely overlapping the enamel for a millimeter, thus forming the gingival crevice. It has been shown, however, that the gingivae are attached to the enamel and that normally the gingival crevice is exceedingly shallow.

"The Gottlieb enamel cuticle is a double membrane consisting of the primary and secondary cuticles. The secondary cuticle is closely continuous with the oral mucous membrane, thus affording intimate attachment of the gingivae to the teeth."

"Many operative procedures used in the placing of fillings, crowns and orthodontic bands as well as the scaling of the teeth, are based on the old conception of the gingival crevice. There can be no doubt that the gingival attachment to the tooth is often loosened by these means creating a wound by which infection may enter."

165—Dechaume and Duchêne: **Kyste paradentaire aux depens d'une molaire du lait. Paradental cyst at the expense of a deciduous molar,** in: La Revue de Stomat., 36: 239-242. 1934.

Case of a paradental cyst about the root of a second deciduous molar in a girl of seven years. Removal of the cystic cavity was performed. The follicle of the second permanent premolar with its pericoronal sac, simulating part of the cystic cavity, was opened by the curette. The follicle was then left undisturbed. A month later the cavity was almost entirely filled and the follicle of the second premolar showed no evidence of injury.

The paradental cystic cavity has no connection with the follicular cyst. It does not perforate the pericoronal sac of the permanent teeth but develops at the expense of paradental epithelial debris. It differs from the follicular cyst which seems to result from hydropsy of the pericoronal sac. The authors believe that paradental cysts about deciduous teeth can be removed and the germs of the neighboring permanent teeth be preserved with safety.

—*G. H.*

166—Dechaume, Dr. M.: **Kystes du maxillaire superieur par inclusion epitheliale. Maxillary cysts with epithelial inclusion,** in: La Revue de Stomat., 36: 112-116. 1934.

Two case histories of maxillary cysts in the central and lateral regions are presented. The peculiar thing about these cysts was the

fact that the vitality of the neighboring teeth was unimpaired. Histologic examination of the cysts revealed a fibrous wall and a lining of squamous epithelium. The cystic fluid showed no trace of cholesterol.

The pathogenesis of this type of cyst may be explained by the anatomy of the palatine canal which is the remains of the primitive connection between the buccal and nasal cavities. Occlusion of the canal by evagination either from the buccal or nasal cavities is often evidenced by the presence in the midline, of epithelial inclusions of the stratified squamous type, or transitional epithelium of the respiratory type. These inclusions fuse in the region of the anterior teeth. The etiology of the cysts is uncertain. Their symptomatology is that of the paradental cyst, but the teeth maintain their vitality.

—*G. H.*

167—Mann, James B., D. D. S., M. D.; Crane, Arthur B., D. D. S., and Kaplan, Harry, D. D. S.: **Pyorrhea alveolaris: Histopathology and results of radical surgical treatment,** in: D. Cosmos, 76(4): 432-445. April, 1934.

The surgical technique employed by the essayists is designed to eliminate all of the diseased tissue without unnecessary destruction of normal tissue.

The authors have made sections of tissues taken from thirty-seven living cases either before or at intervals after surgical treatment.

Epithelial proliferation covering the gingival crests and crevices and formation of extensive columns of cells extending down into the underlying submucosa were noticed early in the disease and were formed in response to the mild irritation present in the beginning.

"The surface epithelium in the involved areas shows an absence of a cornified layer and also that the cells on the surface are of the type normally seen in the stratum granulosum." The surface cells also show hydropic changes due to mechanical, chemical or bacterial irritants. In addition to the above, degenerative changes in the epithelial columns in submucosa characterized by liquifaction of individual cells are seen. These areas of liquifaction gradually coalesce by the disintegration of intervening cells until cystic areas of considerable size are formed.

"Subepithelial changes are characterized by a heavy monocytic infiltration with the marked perivascular arrangement of the cells."

An early breaking down of "principal fibers" of the peridental membrane takes place allowing collapse of the gingival septum and results in weakening the support of the tooth.

The connective tissue stroma of the submucosa is lost and replaced by heavy cellular infiltration. There is a continuous process of healing (scar tissue) taking place but which in turn breaks down.

The cementum shows extensive destruction.

The alveolar process shows considerable osteoclastic action and sequestration of necrotic bone from that part.

The authors believe that the conditions observed in the above study justify the complete removal of infected tissues and only then can proper health be restored to the gingivae.

(b) Periodontal Bacteriology

(Continued from Vol. 5(2): 116. July, 1934)

49—Andre, Dr. H.: **Ueber neuere anaerobe Bakterienbefunde bei Paradentose.** Bacteria in paradentosis, in: Paradentium, 6: 84-92. 1934. Z. Rundsch., 43: 1934.

In paradentosis the order of frequency of bacteria is roughly: spirochetes, spirillae, vibrio, fusiform bacilli, leptothrix, actinomycetes, and cocci. The anaerobic forms are more difficult to culture and study, yet the author has studied and isolated a number of these organisms, using the technique of Fortner plates with B. prodigiosus. Descriptions are given of forms isolated from cases of paradentosis.

—*J. G. O.*

50—Hopkins, Joseph A., D. D. S.: **Potential absorptive areas in paradentosis,** in: D. Cosmos, 76(3): 346-350. Mar., 1934.

Photomicrographic illustrations are used to demonstrate that gingival pockets are as much of a focus of infection as apical

abscesses. These gingival areas constitute a large and extensive potential absorptive locality for bacteria and their toxin products.

It is just as important to eradicate these menaces of our patient's health as infected tonsils which contain colonies of bacteria and detritus.

51—Klieneberger, Dr. E. and Andre, Dr. H.: **Microben bei Paradentose.** Microbes in paradentosis, in: Paradentium, 6: 43-48; 79-84; 103-108. 1934. Z. Rundsch., 1934.

It is concluded especially difficult, in such a chronic disease as paradentosis, to determine the etiological relations between the diseased process and bacterial findings. The location is one exposed to the varying changes in the bacterial content of the whole oral cavity. Even should a characteristic microbic picture be found, the complete etiological cause may not have been discovered. For in this chronic process, the microflora found can be the result of a long standing abnormal condition as well as the cause of it. Judgment in this instance is rendered still more difficult in that clinical infectiousness is almost completely lacking, that animal experiments give no information; and likewise there is no help from the serological side.

Finally, if one takes into consideration that the bacterial picture is characteristic in many respects, for example amoebae, B. fusiformis, spirochetes, streptococci, etc., and that these are, however, not specific in all cases, and also are not found exclusively in paradentosis, the decision can be reached that neither a particular microbe, nor a special symbiosis of several microbes can be regarded as the cause of paradentosis.

—*J. G. O.*

52—Lesbre: **The pathogenic power of certain bucco-dental saprophytes,** in: Rev. de Path. Comparée et d'Hygiene Generale. August, 1933. Abstract, Rev. de Stomat., 56. 1934.

The opinion of certain authors is disputed who contest the importance of the pathogenic role of buccal saprophytes. From the study of numerous works on bucco-dental septicity and personal researches, Lesbre deduced, that the hemolytic streptococci and viridans have not the exclusive pathogenic power, and that the non-hemolytic streptococci are not negligible.

The action of the streptococci is often complicated by the entry of other germs. Among these the fusiform bacillus must be classed first. This bacillus presents a real specificity for the dental system since it appears in the mouth only from the time of the evolution of the teeth.

Assuredly, it may exist as a saprophyte in small quantity in healthy mouths but it takes an important development in many foci of infection. Although, it may or may not be associated with the spirochete, it never develops outside of a narrow symbiosis with the streptococci which the cultures always show. While it is very difficult to obtain cultures of the fusiform bacillus, it is very easy to get them in association with streptococci. Finally, when the experimental pathogenic power of isolated cultures has appeared null or doubtful to all experimenters, the fuso-streptococci association shows a constant pathogenic power on laboratory animals.

Vincent's spirochetes and other spirochetes, such as Sp. dentium, can be added to the fuso-streptococci association and reinforce the hemorrhagic and necrotic properties.

The staphylococci can take a secondary part in dental infections. More important is the role of anaerobes, Veillon or perforating. The perforating bacillus is frequent in infected teeth and it is interesting to relate it to the bacillus of Achalme, isolated in certain rheumatisms.

Contrary to certain ingenious but paradoxical theories, the clinical and experimental facts appear to affirm the role of focal dental infection inseparable from its humble agents, the non-hemolytic streptococci and the fuso-streptococci symbiosis.

—*Trans. by G. H.*

53—Letter from Berlin, Germany: **Bacterial relations between appendix and oral cavity,** in: J. A. M. A., 103(24): 1867. Dec. 15, 1934.

Prof. Gins in the Institute for Infectious Diseases in Berlin who has previously culti-

vated many hitherto unknown oral bacteria now is examining the mucous membrane of surgically removed appendices, both acute and chronic cases. Approximately ten types of bacteria found were identical with forms that were known to occur in the oral cavity. "Nothing definite can be said as yet about their significance in the pathogenesis of appendicitis."

—*C. R.*

54—Moramarco, G.: **I protozoi parasiti della cavita bocalle.** Parasitic protozoa of the oral cavity, in: Rom. Ann. Clin. Odont. 10: 768. 1933. Abs. in: Deutsche Zahnarzt. Wochensch., 37: 468. 1934.

Two protozoa are mentioned as inhabitants of the human oral cavity, namely the Entamoeba gingivalis, and Trichomonas buccalis. While, in spite of all care, the author was not able to demonstrate the latter; the investigation of the Entamoeba is unusually easy. The favorite spot for this is in the mouth and gingival pockets, above all in the neighborhood of the floor, calculus and deposit on the neck, and at the contact points of the teeth. Middle aged and elderly people show this parasite more frequently than younger. It is almost never found in sound mouths or in those which have been cared for with good fillings. On one hand, the Entamoeba has been falsely held responsible for pyorrhea. On the other, its presence is held beneficial because of its eating bacteria and cell fragments. The author believes it is possible that they have a harmful influence on the tissues of the oral cavity.

—*J. G. O.*

55—Query: **Fusiform bacilli in mouth and Vincent's angina:** J. A. M. A., 102(22): 1873. June 2, 1934.

Query is for information as to incidence of positive Vincent's smears in the absence of any well marked lesions and as to extent to which disorder is communicable in such cases. What treatment is advised? Answer states that opinion is divided. Smith and many others consider them normal inhabitants of the mouth, a few Vincent's organisms being practically always demonstrable in the gingival groove; but under conditions of disease they are greatly increased and Appleton thinks healing goes parallel with their disappearance. Opinion is general that these bacteria are common in filthy mouths with unhealthy gums and treatment should aim to eliminate conditions favorable to their multiplication, such as gingival flaps over partially erupted molars and all rough tooth surfaces, etc., which make mouth cleanliness difficult to maintain. Diseased tonsils should be removed. It is possible that a carrier may transmit the disease but probably only cases with greatly increased numbers of organisms in the active stages are dangerously contagious.

—*C. R.*

56—Wandel, Dr. H.: **Die haemolytischen Streptokokken bei Paradentosen.** Haemolytic streptococci in paradentosis, in: Deutsche Zahnarzt. Wochensch., 37: 528-529. 1934.

Further reports on bacteriological researches in paradentosis reiterating the important part played by haemolytic streptococci. Cultures were taken from the depths of the pockets and care was taken to avoid any contamination by instruments, saliva, gum tissue, etc. From 75% of the cases showing clear clinical pictures, pure cultures of the streptococci were secured. Focal infection from this source is emphasized.

—*J. G. O.*

(c) Other Laboratory Researches

(Continued from Vol. 5(2): 117. July, 1934)

60—Burchardt, Dr. Friedrich: **Untersuchungen der Kapillaren Schwangerer.** Investigations of the capillaries of pregnant women, in: Paradentium, 6: 17-22. 1934; in: Z. Rundsch. 1934.

A number of cases of women in pregnancy suffering from inflammation of the gums were investigated. The capillaries were microscopically studied, and as test places, the nail groove of at least two fingers, the lips, and the gums were used. Changes in the capillaries were found in most of the patients. Typical, corresponding changes could not be established in those with gingivitis. Many of the women without gingivitis exhibited capillary changes, in some, the capillaries were normal. Several characteristic cases are described. It was shown that in a great number of women, a vasolabile

condition existed before pregnancy, that in the greater part the stigmatization is increased during pregnancy, and that in a certain portion, this led to expressed catarrhal changes. The corresponding constitutional relations are a part of the paradentosis-disposition.

—*J. G. O.*

61—Davis, Sherman: **The saliva in caries and pyorrhea,** in: N. Y. J. of Dent., 3(7-8): 186-88. July-Aug., 1933.

Author presents in tabulation form the results of his work on saliva. He determined the pH, Ca, P. content in caries and pyorrhetic mouths.

62—Higaki, R.: **The genesis of various forms of calcification of the epithelium in paradentitis,** in: Kokubyo-Zasshi, 7: 195-199. 1933. Abs. in: Deutsche Z. Wochensch., 37: 856-857. 1934.

A study of the formation of the various types of calcified masses in the paradentium. The material was taken from the unerupted teeth of children as well as from the jaws of middle aged people. The conclusion was that the connective tissue can undergo a calcification by regressive metamorphysis. The form is not always the same. It may be ossified or be reabsorbed.

—*J. G. O.*

63—Morgan, Agnes and others: **Effect of acid, neutral and basic diets on calcium and phosphorus metabolism of dogs,** in: Univ. of Calif. Pub. in Physiol., 8(7): 61. 1934. Abs. of Editorial in: J. A. M. A., 103(23). Dec. 15, 1934.

Authors intended primarily to study pyorrhea but changed to include blood, bones and excretions as well as gingivae and teeth. Experimental observations were made on dogs taken at weaning, at the ages of five to seven weeks. Clinical mouth examinations, blood examinations and X-rays were made monthly, and weights recorded weekly. The alkali-fed dogs were usually larger at every age than comparable animals on the other diets. A definite superiority in growth rate was observed also in the animals given cod liver oil. The roentgenograms indicated nearly normal conditions of bones in the greater number of dogs given cod liver oil, and rickets of varying severity in those without vitamin D. The dogs on acid diets without vitamin D showed the most severe lesions; the alkaline dogs the next most severe; the neutral dogs were the most nearly normal of the group . . . The low calcium group showed the most severe lesions of all, except the one animal that was given cod liver oil from the beginning. The low calcium dogs without cod liver oil were found to have developed osteitis fibrosa; the other vitamin D-free dogs, osteoporosis or osteomalacia . . . It is concluded that paradentosis in varying degrees of severity as well as renal damage may result from the long continued use of alkaline diets either with or without vitamin D and normal calcium-phosphorus ratio and content.

—*Copy.*

64—Schour, Isaac, B. S., D. D. S., M. S., Ph. D.: **The effect of hypophysectomy on the periodontal tissues,** in: J. of Periodontology, 5(1): 15-24. Jan., 1934.

"This report is based on experimental findings in the incisors and molars of twenty-three rats in which the hypophysis cerebri or pituitary gland was successfully removed. Their age when operated upon ranged from 36 to 64 days and the interval between the operation and the death of the animal ranged from 63 to 459 days. An operation was considered successful when there was no increase in spontaneous growth for months and no spontaneous oestrous cycle for weeks or months."

A histo-pathological study of the periodontal tissues of the hypophysectomized rats revealed a number of constant deviations from the normal in the periodontal tissues. The cementum showed resorption in the early stage whereas throughout post-operative life there is continuous apposition and is free from resorption but is, nevertheless, narrower than normal. Over-calcification of a pathologic type took place in advanced post-operative life upon the cementum surface and in the adjacent periodontal membrane.

The alveolar bone gave the appearance of an unusual amount of apposition and resorption having taken place. The bone is sclerotic

in character. The marrow spaces tend to be fibrous and often are reduced in size.

"The peridental membrane shows a prominent reduction in blood supply. The epithelial rests are numerous and prominent. A number of them degenerate and become cystic and a few are calcified."

The epithelial attachment is normal near the gingival crest, however, toward the cemento-enamel junction, the attachment is entirely absent or atrophied.

Conclusion:

"The value of the dental findings in the hypophysectomy picture is two-fold: it gives us clues as to what we may expect in a hypopituitary condition in man; and it gives us clues as to what may happen in a severe constitutional set-back."

65—Schwarz, M. S.: **Der Einfluss des Histamins auf die Gefässe des isolierten Kiefers.** The influence of histamine on the blood vessels of the isolated jaw, in: Paradentium, 6: 109-118. 1934; in, Z. Rundsch. 1934.

The author isolated the upper and lower jaws of some dogs and cats, and by cannulizing the arteries was able to perfuse through the tissues, solutions of histamine in varying concentrations. Histamine has a dilator effect on the capillary musculature and also increases the permeability of the capillary walls. The effect is directly proportional to the concentration, this being in any case, very minute. The effect on the arteries and arterioles is opposite, and acts as vaso-constrictor.

The structure of the pulpal arteries is very simple and resembles most closely that of the capillaries. Thus the experiments showed the dilatory effect of histamine on the pulpal vessels. The author offers this action as a possible cause of peridental inflammation. A temporary histamine excess elsewhere in the body is carried by the blood to the paradentium, causing a dilatation of the capillaries. The metabolic balance between the blood and the tissues is disturbed and there is a further liberation of histamine to set up an increased inflammation and so on indefinitely in a vicious circle.

—*J. G. O.*

(d) Clinical Etiology

(Continued from Vol. 5(2): 129. July, 1934)

283—Adloff, Dr.: **Zahncaries und Paradentose als Kulturkrankheiten.** Dental caries and paradentosis as diseases of civilization, in: Deutsche Z. Wochensch., 37: 449-453. 1934.

Caries and paradentosis are discussed and the conclusion reached that they are comparatively modern. The enormous increase in caries is not due to any one factor, but probably to a combination of many. It has been observed in animals that a change from the natural wild life to a domesticated or captive one makes them more liable to dental defects and diseases. This same thing but to a greater degree, is what has happened to man.

—*J. G. O.*

284—Osteite Archimaud, J. C.: **Experimental osteitis fibrosa and paradentosis, fibreuse experimentale et paradentose,** in: Revue Mensuelle Suisse D'Odont.: 895. Nov.. 1933. Abs. in: Revue de Stomat., 552. 1934.

The conclusions of this study are:

1. From an etiologic viewpoint it is necessary to divide affections of the paradentium into: (a) paradentosis provoked by local causes; (b) paradentosis arising from general metabolic disturbance.

2. The geographical localization of paradentosis is different from that of caries. The paradentosis arising from general metabolic dysfunction occurs frequently in caries resisting individuals. It rarely attacks individuals with rampant caries. These seem reserved for paradentosis of local origin.

3. In countries where paradentosis from general metabolic dysfunction is present the diseases producing an acid (?) blood are often frequent.

4. The microscopic examination of the jaws of 16 animals (14 rabbits and 2 cats), among whom fibrosa osteitis was experimentally produced, revealed changes of the paradentium of all the animals.

5. These changes are identical with those characterizing human paradentosis.

6. There is reason to believe that paradentosis of a general metabolic nature lies in the ring of osteitis fibrosa of Recklinghausen and in particular with the latent fibrous osteitis of Askanazy.

—*Trans. by G. H.*

285—Bader, Jean: **La gingivo-sclerose dans les états pyorrheiques.** Gingival sclerosis in pyorrhea, in: Semaine Dentaire, 16: 26-32, 141-156. 1934.

Dr. Bader is of the opinion that the reticulo endothelial system plays a prime role in pyorrhea. This system is in contact with all the tissues of the body and in the dental region system is present in the dermal papilla in the arteriolar, venous and lymphatic spaces. The reticulo endothelial cells are the watchdogs of the body. Toxins, proteins, active colloids, metabolic products, etc., are all taken up by these cells. The substances carried by these cells lodge in hyperactive tissues. The buccal mucosa whose defective hygiene and numerous irritations keep it in a state of hyperactivity is highly sensitive to these reticulo endothelial cells. The gums, therefore, are a faithful mirror of the state of health of our innermost physiological functions. Hepatic diseases, kidney and intestinal diseases, diabetes, typhoid, influenza and chronic diseases all affect the reticulo endothelial system and thereby the dental regions resulting in a stomatitis. The autonomic nervous system also plays a role in stomatitis because of its action on the reticulo endothelial system.

The permeability of the gingival epithelium is regulated by this system which is affected by both exogenous and endogenous means. Defective hygiene, tartar, prosthetic irritations, act as exogenous causes. From the endogenous route the permeability of the gingival epithelium may be brought about by:

(a) A metabolic disturbance of the liver function which results in a decrease in the sulfocyanate radical. The diminution in potassium sulfocyanate is transmitted to the saliva and creates a flocculation of intratissue colloids. A rise in osmotic pressure results which renders the gingival epithelium permeable by the excess of intracellular liquid; (b) Excitation of the reticulo endothelial system by insufficiently disintegrated proteins which sensitize the organism.

The increase in epithelial permeability permits the introduction of electronegative colloids which produce an anaphylactic shock resulting in necrosis and ruptured capillaries. This anaphylactic mechanism may go on in the nasal, bronchial and digestive as well as the buccal mucosa.

The bacterial infection in pyorrhea may be of exogenous or endogenous source. The endogenous source is via the reticulo endothelial system which carry germs to tissues which are in an allergic state; and the gums are most frequently in such a state. Pyorrhetics often show affections of the regions touched by the reticulo endothelial system; chronic catarrh of the respiratory apparatus and congestion of the genital mucosa, boils, etc.

As a result of the above considerations, the local therapy must be accompanied by a general treatment. One must modify the system, rendering it as sclerogenous as possible. Calcifying agents, cholesterins, tannins and lipoids are employed. The general treatment must fulfill the following conditions:

1. Eliminate the toxic causes by increasing elimination through the skin and kidneys, and stimulating the anti-toxic organs, liver and adrenals.

2. Diminish the hyperviscosity and hypercoagulability of the tissues by augmenting intercellular changes (potassium iodide and sodium citrate).

3. Desensitize the body by crystalloids such as sodium and magnesium hyposulfite and hypophosphites.

The metallic stomatites may be avoided by blocking the reticulo endothelial system with a colloid of a dispersed phase.

Gingival sclerosis may be effected physically by beta rays or those of radium. Basic chlorhydrate of quinine is an efficacious chemical sclerosing agent and is recommended by the author. Calcium chloride augments the sclerosing action and aids in bone formation. Clinically there results a rapid diminu-

tion of the turgescence of the mucosa and arrest of suppuration.

The sclerogenous method is employed in:

1. All chronic gingival irritations.
2. Inflammatory tumors (epulis).
3. Treatment of apical tumors and fistulas.
4. Tooth pulp to stop decalcification of teeth after children's diseases.
5. Sclerosis of the alveolar border after extractions to enable us to direct resorbtion, and to harden the mucosa under full dentures and mobile partials.

—*G. H.*

286—Boenheim, Dr.: **Endocrinologie et paradentose.** Endocrinology and paradentosis, in: L'Odontologie, 72: 239-256. 1934.

The relation of the internal secretions to odontology implies two questions: in what manner do the hormones control growth, constitution and the use of teeth and to what degree endocrine dysfunction manifests itself in paradentosis or vice versa.

Hyperthyroidism results in a regular well formed arch whereas hypothyroidism shows an irregular compressed arch. Hypopituitaries show large incisors and canines, prognathism and an irregular arch. Adrenal dysfunction results in a pigmentation of the buccal mucosa. Hypertrophy of the thymus is accompanied by highly enlarged molars. Likewise is the eruption time of the teeth controlled by hormones.

That there is a relationship between paradentosis and endocrine dysfunction is common knowledge. There are, however, no characteristic blood changes involved. The author has found characteristic changes in the specific dynamic action (metabolic augmentation under an albuminous diet). After reviewing the work of Citron, Weinmann, and others it is concluded that in paradentosis the specific dynamic action is either diminished or augmented in the presence of a normal basal metabolism.

The occurrence of paradentosis among a small percentage of diabetics (on an average of 6.8% of 790 diabetics) leads him to believe that diabetes does not imply the presence of paradentosis. Paradentosis is not a constant symptom in diabetes although it is often of a similar nature, one not being dependent upon the other.

Paradentosis is often accompanied by hepatic disorders in about 17% of the cases.

Paradentosis and endocrine troubles are more frequent in women than in men and it may be possible that the female is predisposed to paradentosis.

The author does not think that endocrine deviations provoke paradentosis. Rather is it more likely that paradentosis and endocrine dysfunction are the expression of the same constitutional disturbance.

The therapy, therefore, should include both local and systemic treatment. Endocrine dysfunction should be treated by stimulating or repressing the glands according to the disease.

—G. H.

287—Breuer, Dr. Karl: **Die Internuntersuchung der Paradentose-Kranken.** Systemic studies in paradentosis, in: Paradentium, 6: 93-103. 1934, in: Z. Rundsch. 1934.

A review of investigations, by researchers into the systemic conditions of patients suffering from various paradental inflammations. The conclusion is that there is no systemic finding typical of paradentosis. Blood examinations, blood sugar, potassium and calcium percentages, etc., all give normal pictures, or else are so widely scattered as to be of no value as diagnostic features.

—*J. G. O.*

288—Capmas, Miss: **De la pyorrhée alvéolo-dentaire. Contribution a l'étude pathogenique et au traitement.** Contribution to the pathogenic study and treatment of pyorrhea alveolaris, in: L'Odontologie, 72: 672-675. 1934.

Pyorrhea alveolaris is not a specific local malady of the gingivo-dental region. The clinical evidence of the presence of dyscrasias, arthritis, nutritional disturbances are to the author a sure sign that pyorrhea is the exterior manifestation of an upset in the general health.

Mineral water cures often cause transitory aggravation of dental affections no matter what the general trouble may be that is being treated. This is due to the mineral water upsetting the humoral equilibrium and lysing

the fragile leucocytes. The diminution in leucocytic resistance, as in all inflammations, is shown in pyorrhea.

The treatment, therefore, consists in clearing up the systemic troubles by a diet rich in vegetables and administration of glandular extracts when necessary. Vaccino-therapy is provisory and inconstant. Local operative measures are necessary to remove fields favorable to bacterial growth. The treatment is both general and local and the association of dentist and physician is therefore essential.

—*G. H.*

289—Cohen, Joseph T., D. D. S.: Lowered resistance, in: D. Survey, 10(7): 47-48. July, 1934.

Conclusions from a survey of 1,200 children:

(1) general gingivitis is seldom encountered in physically well children,

(2) general lowered systemic resistance of the child is perhaps the most important cause of gingivitis,

(3) this might be especially true in children troubled with some form of gastro-intestinal disturbance.

—*M. S. W.*

290—Comfort, S. A.: The etiology and treatment of Vincent's infection, in: Penn. D. J., 25(41): 171-177. May, 1933.

Review of the literature on this disease.

291—Dechaume, M.: Considerations sur la pathogenesis des tumeurs hyperplasiques des gencives, epulis. Pathogenesis of hyperplastic tumors of the gums, in: Revue de Stomat., 36: 301-316. 1934.

Clinical histories and blood counts of nine cases of different types of epulis are presented and illustrated by photographs.

The development of didermic hyperplastic tumors is usually ascribed to a chronic irritation with its resultant inflammatory lesion. Three stages of development exist: a gingivitis, formation of granulation tissue and the final hyperplastic tumor of considerable growth. However, the role of local inflammation is not sufficient to explain the pathogenesis of hyperplastic tumors. The same microbe, the same irritation, the same traumatism do not give analogous reactions in different individuals. The individual constitution determines the progress of and the susceptibility to the disease. Dechaume believes that there is always a hematogenic disturbance present, anemia, eosinophilia or a delayed bleeding or coagulation time. These blood troubles may be congenital (hemophilia), or acquired infections such as result from chronic diseases which weaken the system (tuberculosis and syphilis). Auto-intoxications and glandular disturbances may also play an etiologic role.

The treatment includes excision, suppression of the infected gingival pockets and general treatment to clear up the blood disturbance. If the blood dyscrasia persists a relapse will occur.

—*G. H.*

292—Francia, Dr.: Immunotransfusion in stomatology. (Italian foreign letter.), in: J. A. M. A., 103(9): 694. Sept. 1, 1934.

At a meeting of Italian Society of Oral Surgery, Dr. Francia stated that he had used immunotransfusion with favorable results in a case of osteo-myelitis of the lower jaw. However in two pyorrhea cases treated (in addition to the usual methods) with a small transfusion of blood from a person convalescing from furunculosis, he did not succeed so well. Above method is to be regarded as a heroic remedy in special cases and not destined for widespread use.

293—Gassen, N. M., D. D. S.: Role of traumatic occlusion in etiology of pyorrhea alveolaris, in: D. Outlook, 21 (3): 99-107, 144-150. 1934.

Dr. Gassen treats in a comprehensive and salutory fashion the physical aspects of occlusion, mal-occlusion and traumatic occlusion. He demonstrates the lines of force and stress in the individual normal occlusion—how the masticatory forces are met by the counterforces of the parodontium, so that an equilibrium is attained, how where there are slight discrepancies of force there is an adjustment on the part of the dental mechanism.

Where the masticatory force is in excess the teeth are rocked in their sockets to an excessive degree and eventually pockets are formed.

The article is amply illustrated with simple diagrams showing the direction of the forces in relation to the teeth.

—*S. H. S.*

294—Gorecznski, Henryk: **Clinical lesions of the parodontal region in systemic diseases,** in: Polska Stomat. Lwow, (Lemberg), Poland, 12: 105-114. April-May, 1934. (With 7 statistical tables.) Abst. in: Dental Cosmos, 76 (10): 1114. October, 1934.

The correlation existing between systemic diseases and parodontic pathosis is presented. The ages of the patients investigated were from sixteen to eighty years. The systemic diseases — broncho-pneumonia, emphysema, tuberculosis, syphilis—and all forms of infectious diseases were investigated; endocarditis, gastritis and enterocolitis; cholecystitis, pyelitis, lymphogranuloma, lupus, polyarthritis are specially reported, and the pathosis of the parodontium was observed, together with pyorrheic manifestations.

The conclusions are, that in all chronic systemic diseases, specially in metabolic disturbances, there is a progressive alteration of the parodontium, giving rise to a retrogressive parodontosic alteration.

—*Copy.*

295—Heinrich, Dr. E.: **Die Paradentose als psychologisches Problem.** Paradentosis as a psychological problem, in: Paradentium, 5: 52-55, 69-76, 92-96. 1933.

The author believes that serial section study of tissues under the microscope will not reveal the cause of paradentosis, as these are only the proofs of the result. The disease is an expression of the reaction of the entire organism and is not an entity in itself. A number of cases are cited of patients evincing symptoms of paradentosis with no physical basis. Instead, underlying psychoses, were at fault, and on psychoanalysis, these were cleared up together with the dental symptoms. Dr. Heinrich tries to emphasize the study of the entire personality to find the cause, rather than to merely accept the fact of the loosening of the teeth.

—*J. G. O.*

296—Jarmer, Dr. Karl: **Wer neigt zur Paradentose?** Who tends to paradentosis? in: Z. Rundsch., 43: 613-617. 1934.

Dr. Jarmer reiterates the views of Sachs and Heinrich regarding a psychoanalytic approach to the treatment of paradentosis. The disease is not always an entity in itself, but sometimes may reach back to disharmonies in the personality, which cause the manifestations, and which must be reached, if the outward symptoms are to be cleared up.

—*J. G. O.*

297—Lefcourt, Jesse L., D. D. S.: **The hygiene of the gingiva.** in: D. Items of Int., 561: 330-334. May, 1934.

Author presents six cases in which either the lack of oral hygiene, or the use of poor methods of oral hygiene has resulted in disaster to the soft and hard tissues of the mouth.

—*M. S. W.*

298—Lidji, Isaac: **Une nouvelle theorie sur l'origine de la pyorrhée alvéolaire.** A new theory concerning the origin of pyorrhea alveolaris, in: L'Odontologie, 72: 190-195. 1934.

The majority of authors agree that the expulsion of teeth properly called pyorrhea alveolaris, springs from a constitutional disturbance of internal origin. Nevertheless, clinical evidence shows that these disturbances are merely predisposing factors and not the original cause, and moreover these predisposing causes do not infallibly produce the disease.

The author believes that pyorrhea is the expulsion of the tooth from its alveolus due to a disruption of the dynamic equilibrium, existing between the tooth and the bone. The presence of the tooth determines the alveolus. Where there are no teeth there are no alveoli. Abnormal directions of the teeth form abnormal alveoli in the jaw. The jaws yield to the forces which the teeth exercise upon them and the maxillae oppose a contrapressure. After the growth of the tooth the pressure against the jaw stops but the contrapressure of the bone continues. Teeth without antagonists are slowly expelled from their sockets while teeth next to extracted teeth present alveolar absorption. Expulsion is most usual where the teeth have conical converging roots and are consequently less firmly implanted than those with diverging roots. The general state of the patient is only one of

the many predisposing causes, as are the local causes. The principal treatment is prophylactic and consists in maintaining a full arch and the prevention of malocclusion.

—*G. H.*

299—Lufkin, A. W., D. D. S.: A discussion of the etiology and treatment of pyorrhea, in: D. J. of Australia, 6: 419-433. 1934.

The confusion existing in the mind of the general practitioner concerning the etiology of periodontal lesions is described. From a standpoint of clinical practice, the following conclusions concerning the etiology of pyorrhea are presented:

1. "There may be an inherent predisposition to pyorrhea, as type forms are observed in adults and children of the same family."

2. "This predisposition may be due to family or individual dietary habits (lack of sufficient mineral or vitamin intake). The normal metabolic activities of the body may not be in a state of equilibrium, resulting in a lack of fixation of incested Ca and P, etc. (endocrine imbalance?)."

3. Traumatic occlusion has unquestionably a part in the etiology . . . yet many teeth under heavy stress have a normal gingival picture.

4. Certain systemic diseases apparently act as predisposing causes, particularly diabetes.

5. Local causes are unquestionably strong factors in inducing pyorrhea.

6. The role of microörganisms is secondary in character. The conclusion is that the etiology of pyorrhea is most complex, and that all attempts to prove a specific cause have resulted in failure.

There are two types of pyorrhea, simple and complicated, and both result in pocket formation. The "simple pyorrhea" of Box corresponds to the "Schmutz-pyorrhoe" of Gottleib and to the "paradentitis" of Becks. The "complicated" type of Box corresponds to the "diffuse alveolar atrophy" of Gottleib and the "paradentosis" of Becks.

The treatment of pyorrhea consists of preoperative scaling, and medication to reduce the oral flora followed by suitable surgical treatment to remove deposits from the cementum and bring about reattachment of the peridental membrane and pocket elimination. The author describes subgingival curettage, conservative and radical; the flap operations, radical and modified; and gingivectomy. All types of surgery yield satisfying results. Treatment as it stands today rests upon empiricism. There are many problems regarding the etiology and pathology of pyorrhea that are yet to be satisfied.

—G. H.

300—Manasse, F.: Erfolge in der paradentosebehandlung durch anwendung systemischer unstimmungstherapie. The results of systemic therapy in the treatment of paradentosis, in: Z. für Stomat., 31: 950. 1933. Abst. in: Deutsche Z. Wochensch., 37: 209. 1934.

The author attacks the factors in paradentosis frequently called etiologic and treats the sickness on the basis of endogenous causes of apparent metabolic anomalies. In many cases of paradentosis, he has used the preparation, Uricedin, to great advantage and with good results.

—*J. G. O.*

301—Marzuello, E. R.: Bleeding gums, in: N. Y. J. Dentistry, 4: 278-281. 1934.

"Bleeding gums" is a term describing a symptom; it is not a disease in itself. The etiology may be purely local in which case it is a dental problem, or it may be related to a general constitutional disturbance, in which case it is a medical one.

Etiology:

A. Local causes:
   1. Injury.
   2. Calculus.
   3. Dental caries.
   4. Pyorrhea alveolaris.
   5. Acute or chronic stomatitis.
   6. Neoplasms.

B. General causes:
   1. Scurvy.
   2. Blood dyscrasias
      a. purpura hemorrhagica
      b. leukemia
      c. pernicious anemia
      d. aplastic anemia
      e. hemophilia.
   3. Arterio sclerosis.

4. Diabetes mellitus.
5. Heavy metallic poisonings
   a. lead
   b. mercury
   c. arsenic
   d. iodides
   e. bismuth.
6. Febrile states.
7. Toxic conditions.

There are three essential factors involved, viz. (1) Histological structures of the gums; (2) the gums are readily and repeatedly exposed to trauma in mastication; (3) increased capillary permeability which may be the result of vitamin C deficiency. Other factors to be considered are: deficiency of vitamin D or blood calcium; diminished platelets; infection.

302—Passow, Dr. Hans: **Die Paradentose als Indikator eines vorzeitigen verschleisses von Organsystemen.** Paradentosis as an indicator of a previous running-down of the organism, in: Z. Rundsch., 43: 678-680. 1934.

The author gives a brief review of the work, showing paradentosis to be but a local symptom, with wider organic causes. He reiterates the need for a wider organic basis of attack and advises assurance of an adequate vitamine content in the daily diet.

—*J. G. O.*

303—Pont, A.: **Gingivodental hemorrhages in patients with hepatic disturbances,** in: Semaine Dentaire, Mar. 25, 1934. Abst., in: J. Am. Dent. A., 1107. 1934.

The author points out the vicious circle existing between gingivodental infections and hepatic infections. The presence of one of these conditions should lead to a search of the other. The symptoms are of two kinds, clinical, which may be determined with the patient in the chair, and laboratory, which may be diagnosed by means of tests (Maillard coefficient, alimentary glycosuria, etc.). In all hepatic patients or in those with pyorrhea with involvement of the liver, spontaneous hemorrhage of the gums may be observed with simultaneous hepatic attacks. These hemorrhages are not serious and may be a valuable aid in diagnosis, furnishing a warning should surgical intervention be necessary. In hepatic patients oral surgery should be avoided whenever possible, but if an operation is found to be necessary, general anesthesia should not be given. In light cases of hepatic insufficiency, calcium chloride may be administered for two or three days before the operation. In more serious form, blood serum injections should be made. If, in spite of these precautions there is a hemorrhage, caustic medicaments and electro-coagulation should never be used. A simple tamponment should be employed and an appropriate general treatment followed. If the hemorrhage is very severe profuse blood transfusion is advised.

—*G. H.*

304—Rawengel, Dr. G.: **Das Wesen der Paradentose.** The nature of paradentosis, in: Z. Rundsch., 43: 1075-1080, 1115-1120. 1934.

Dr. Rawengel believes the causes and cure of paradentosis lies far in back of the local conditions and are to be found in mental changes.

—*J. G. O.*

305—Roy, Dr. M. (Paris): **Le pronostic de la pyorrhée alvéolaire.** The prognosis of pyorrhea alveolaris, in: L'Odontologie, 72: 717-722. 1934.

Four factors influence the prognosis of pyorrhea alveolaris:

1. Age: In the common form of pyorrhea with pockets, the rapidity of the disease's progress increases with the youth of the patient. Pyorrhea in the young is rapid in its progress and difficult to treat. However, in pyorrhea of the juvenile atrophy type without pockets, the progress is much slower. In this case, root caries is the thing to be avoided.

2. Anatomical conditions: The thicker the alveolar borders are and the longer the roots, the slower the progress of the disease and the better the prognosis.

3. General pathological conditions: Pyorrhea, although an autonomous disease, is of an arthritic nature and may be aggravated and precipitated by any affection of that nosological group as well as by endocrine disturbances. The cure of pyorrhea, however, can't be effected by merely treating the accompanying systemic disturbances. Local treatment is essential.

4. Local pathological conditions: When limited to etiological elements of a constitu-

tional nature the progress of the disease is slow, but when a local condition such as gingivitis is added, the disease progresses rapidly. The author emphasizes the importance of maintaining the oral hygiene and thereby avoiding local causes.

306—Sachs, Dr. Hans: **Greuzen der Zahnerhaltung bei Paradentose.** The alveolus in paradentosis, in: Deutsche Z. Wochensch., 36: 661-665, 688-693. 1933.

The problem relating to the dental supporting structures in paradentosis is basically different from the same problem in caries. The latter is answered through the actual progress of technic, of methods of treatment, and occasionally, through the consideration of the whole organism. In paradentosis, the answer lies in the consideration of the neighboring teeth in a stricter and in a wider sense. Concerning the question of the retention or extraction of pyorrhetic teeth, in the answer of which accurate clinical and roentgenological researches are necessary, there stand in a sort of ideal concurrence with each other: hygienic, constitutional, cosmetic, psychologic, and technical considerations, the proper balance of articulation and eventual substitution of artificial teeth.

The question of the moment of extraction is important. If it is undertaken too late, the disease takes root further around itself. If at the right time, in most cases, the neighboring teeth of the extracted one can be saved.

This recovery owes itself to the circumstance, that a strong bone apposition sets in after the early removal of a loosened tooth, which often extends far beyond the limits of the original alveolus. Thus neighboring alveoli gain greater steadiness and strength.

—*J. G. O.*

307—Schalow, Dr. Walter: **Die Pathogenese der Musiker-Paradentose.** The pathogenesis of musicians' paradentosis, in: Z. Rundsch., 43: 218-225, 250-259. 1934.

Many musicians suffer from a paradentosis, the origin of which is due to the instrument, this necessarily being limited to wind instruments. Not all musicians have paradentosis, but in those who do, there is a repeated correlation of paradentosis with traumatic injury through blowing or pushing against the instrument. There is an isolated localization of the paradentosis in the region of the front teeth, often in the form of paradental abscesses. Loosening of the teeth usually is limited to one jaw, almost always the lower. There is great injury to the paradentium of young patients, and often paradentosis, in spite of a brief acquaintanceship with the instrument. The chief task for the dentist is one of prophylaxis. Close watch must be kept while the youth is learning how to play an instrument. If there are any symptoms, either another instrument should be taken up, or the patient should take up some other calling.

—*J. G. O.*

308—Sutton, Harvey, M. D.: **Notes on periodontitis and its genesis,** in: Med. J. of Australia, 2: 16. 1934.

The author claims that the causes of periodontitis are to be found during the period of permanent tooth formation. The condition is usually found in young adults although it may not flare up for many years.

309—Turner, J. G., F. R. C. S., L. R. C. P., L. D. S.: **A clinical review of the interrelation between caries and pyorrhea,** in: Brit. D. J., 56(8): 369-374. April 16, 1934.

Caries and pyorrhea run their course concurrently and own the same causation. There is no age limit in either of these diseases since both are present in youth as well as in adult life.

Serumal tartar is not the cause of pyorrhea, but a sequence of the inflammatory condition and it is not an index of alkalosis.

Mucous secretion may solve or be a clue to the origin of pyorrhea and caries, for it is mucous which is the immediate coating of both teeth and gums. It has been shown that the absence of vitamin A results in a local infection of the mucous membranes due to the failure of mucous secretion.

310—Weski: **Can suppurative periodontoclasia be related to kidney stone removal, or to smoking habit?** in: Z. Rundsch., 43: 35. 1934.

Patient's history: 35 years of age. Smokes cigars and pipe. Six months previous had kidney stone removed. Patient presented with a suppurative labial gingival pocket on central

incisor. Pocket was treated with alternate rinsings of lactic acid, chlorphenol, and a camomile preparation twice a week for four weeks, with no success. (Question sent to Dr. Weski.)

Dr. Weski's reply:

Since it is an isolated pocket, it is probably due to a local phenomena and has no relation to any systemic disorder. It may be caused by traumatic occlusion. Conservative or radical treatment is advised together with the relief of the traumatic occlusion.

(e) Symptomatology and Diagnosis

(Continued from Vol. 5(2): 138. July, 1934)

199—Achard, Paul: **Considerations sur la pathogenie des stomatites dites toxiques.** Pathogenesis of the so-called toxic stomatites, in: Le Progres medical. May 12, 1934. Abst. in: La Revue Odontolog., 664. 1934.

The elimination through the saliva of metallic poisons used in therapeutics can lead to a local stomatitis of the gums with the appearance of a characteristic line and affected zones. If the toxin continues to be introduced into the body, the necrosis of not only the soft gingival tissues but also the hard underlying tissues as well may be effected; and the infection usually present in the mouth may be superimposed on the action of the poison. The classicists consider the second role (infection), of prime importance and classify these stomatites among the infectious ring. According to Galippe the poison weakens the system and the infection brings about the disease which is toxi-infectious.

The different theories diverge widely in their interpretation of the mechanism of the stomatites. The removal of carious teeth and tartar (without improvement), seems to rule out irritative factors. Also, despite the state of the mouth, cessation of the treatment (therapeutics containing metallic poisons), will cause the lowering of the inflammation. According to Marcel (Toulouse), the poison acts by injuring the epithelium or by diminishing the phagocytosing power of the leucocytes. Letulle has advanced the theory of arteritis obliterans of the gingivo-alveolar regions. Since a terminal circulation exists in the gums, teeth, alveoli and certain organs, the poisons are able to lodge there more easily and obstructing the vessels cause ulceration and necrosis. After the removal of the teeth this terminal circulation is modified by the creation of a new anastamosis between the internal and external alveolar plates and the mucosa. The circulation, now freer and richer, the poisons are carried away and it is thus that edentulous mouths avoid the toxic poisoning.

The pathogenesis of the so called toxic stomatitis can then be explained by a vascular disturbance due to the terminal circulation of the parts, and given the appearance of a general infection by the buccal infection.

—*Transl. by G. H.*

200—Bocchi, J. G.: **Chronic suppurative parodontitis or pyorrhea alveolaris,** in: Penn. D. J., 35(2): 71-73. Jan., 1933.

Differential diagnosis of diffuse and marginal atrophy. Some of the differential symptoms are: (1) pain—present in diffuse atrophy, lacking in the other; (2) in diffuse atrophy isolated teeth are involved, in marginal atrophy, usually several. Other symptoms are the type of shifting undergone by the teeth and general systemic health.

The majority of cases of diffuse atrophy demonstrate an endocrine disturbance with the thyroid and parathyroid predominating in the involvement.

Some of the important work being done by research workers is briefly discussed.

201—Box, H. K., D. D. S.: **The guaiac reaction in periodontal diagnosis,** in: Dental Survey, 22-26. Dec., 1934.

The article is a condensation of a monograph issued recently by the University of Toronto Press. The author describes a simple method of detecting hidden pus in the gingival crevice. A cotton point dipped in tincture of guaiacum is placed gently under the gingival margin. Bleeding must be strictly avoided. The presence of pus is detected by the color change of the solution. The guaiac

reaction is a fairly reliable test for the presence of emigrated leucocytes and may perhaps be a qualitative test as well. Suppurative conditions were found where not expected in clean mouths and conversely in some cases of filthy mouths the emigrated leucocytes were sparse in number. A mildly positive guaiac reaction does not necessarily connote gingival infection, though a strongly positive one must reasonably be interpreted as such. Box does not claim that every case of subclinical suppurative infection will ultimately develop into pyorrhea. However, most cases of pyorrhea pass through a stage where the infection though sub-clinical, could have been detected by the guaiac test.

Concerning treatment the author points out that antiseptics have not been conspicuously successful in destroying bacteria in infected tissues. Those that were beneficial were found to have in addition a stimulating effect on the tissues. This factor in a large measure contributed to the success. Furthermore antiseptics have an inhibitory action on phagocytosis and decreases the bactericidal power of leucocytes. Intensive irrigation with 5% saline solution to create a lymphagogic flow of fluid from the tissues into the gingival crevice is advocated.

—*G. H.*

202—Breuer, Karl: **Examination of hepatic function in paradental diseases,** in: Schweischerische Monatsch für Z., 44. April, 1934. Abst. in: Revue de Stomatol., 36: 487. 1934.

For Parturier, Pont, and Hulin, certain types of hepatic dysfunction will cause inflammatory disturbances of the paradental tissue, while, for Gottlieb, and Weinmann, they will rather provoke a diffuse atrophy of the alveolar process; likewise, Mueller, Rony and Kronfeld attribute general rhyzalisis.

Boenheim examined the hepatic function in 20 diseased individuals, first submitting them to a diet of levulose and determining in 7 cases a curve of hyperglycemia. In order to control these results the author traces the curve of glycemia in 30 patients presenting different degrees of paradentosis, each having ingested a gram of levulose per kilogram of weight. In determining the glycemia at intervals, he found not one case whose curve differed from that for a normal subject.

Breuer explains the difference between his results and those obtained by Boenheim by the fact that the latter's cases belonged to a hospital group who perhaps had secondary hepatic lesions.

—*Trans. by G. H.*

203—Croes and Charlet: **L'Étude des processus paradentosiques par la radiographie.** Study of paradentosis by radiography, in: La Press Dentaire, 36: 153-159, 196-210. 1934.

The authors place much stress on the continual elimination of the tooth from its socket during life. It is a natural physiologic process and occurs in the direction of the root curvature. It seems that a force is exerted from the apex to the gingival border following the direction given by the form of the alveolus.

There are two different forms of paradentosis visible by the X-ray at the debut of the disease. The first consists of an enlarging of the alveolus accompanied by inflammation and laceration of the ligament and microbic infiltration. This form is the result of articular traumatism acting on the teeth in a mesio-distal direction or rotatory, making the tooth a lever of the second type, the apex acting as a fulcrum. The second form shows resorption of the alveolar crests, preceded by destruction of the interdental papilla. Circulatory disturbances result in deep alveolar destruction.

The X-ray is a necessary continual adjunct in the treatment of paradentosis, both in diagnosis and following the progress of the treatment.

—*G. H.*

204—Duflos, M.: **Contribution a l'étude de la stomatite aurique chez les tuberculeux pulmonaires.** Contribution to the study of gold stomatitis in pulmonary tuberculosis. (133 p., Paris, 1934, Marcel Vigne.) Reviewed, in: La Revue de Stomatol., 36. 619. 1934.

Gold stomatitis, while not exceptional, is less frequent than other metal forms of this disease. It occurs during the course or at the end of the treatment when variable doses are given. Men are most often attacked. Classically the clinical picture is characterized by: (1) the diffusion of the lesions which envelop the tongue, inside of the cheeks, larynx, pala-

tinal mucosa and the lips; (2) the whitish color; (3) pain; (4) sialorrhea.

Many clinical forms exist: velo-palatine; papillary extensions; lingual; ulcerus; lichenoid and purpurical; agranulocytic angina; buccal purpura; vesicular stomatitis of the pemphigus type.

The evolution is in general rapid and tends to end in a cure. The pathogenesis is discussed. The diagnosis is evident.

"At the beginning of the gold treatments one is obliged to suspend the treatment in case of accidents. Today, thanks to the calcium gluconate employed as the solvent of crisalbine, one can continue the treatment with ordinary doses that the patient can withstand. They are thus rid of any trouble."

—*Trans. by G. H.*

205—Fixott, Henry C., D. M. D.: **Roentgenographic studies of periodontal disease,** in: J. Am. Dent. A., 21(8): 1377-84. Aug., 1934.

The success or failure of periodontal diagnosis depends, to a large extent upon the operator's roentgenographic interpretation. Any change in the uniform density of the alveolar process, the smooth even appearance of the lamina dura, or the definite outline of the peridental membrane is of utmost significance.

The author describes the various causes of periodontal pathosis, such as improper contacts, calculus, overhanging fillings and crowns, trauma, etc., and includes with each description numerous radiographic pictures. He has found a combination of ordinary and bite-wing films to be exceedingly useful.

206—Francois, René-Charles: **Contribution a l'étude des stomatites et de leur traitement chez l'enfant.** The stomatites and their treatment in children. (78 pages, Paris, Jouve et Cie.) Reviewed in: **La Revue Odontolog.,** 755-756. 1934.

Conclusions:

1. The stomatites are particularly frequent in children who possess all the conditions favorable for their appearance:

A rich and varied buccal flora which appears after the sixteenth month; local irritations repeated with each erupting tooth; frequent lowering of the general resistance due to the habitual infectious diseases of this age.

2. The classic division of stomatites into specific and banal polymicrobic, if it is valuable etiologically, does not correspond to the bacteriological or clinical evolution of the lesions. Bacteriologically, all the stomatites are rapidly the object of a secondary infection by the buccal germs and in particular the fuso-spirillar association. Clinically, most of the specific stomatites tend to rapidly take on the aspect of the banal polymicrobic stomatites.

3. The different clinical aspects (erythemopultaceous, ulceromembranous and gangrenous), of these stomatites constitute the three evolutionary stages of the same infection, whose degree is essentially determined by the intensity of the buccal germs and more or less by the resistance of the individual.

4. The stomatites in children frequently involve gastro-intestinal and pulmonary complications, whose evolution is more serious since they appear in a system with general debility.

5. The necessity of the active treatment of the stomatites in children is, therefore, obvious, because of the seriousness of their evolution and their complications. The treatment will have two aims; action against the banal pyogenous bacilli; and against the spirilli.

6. The local treatment of the lesions will consist in the copious use of mouth washes and also in the use of the usual disinfectants (arsenobenzol, lugol and methylene blue). The action of disinfectants is rapidly exhausted and they should be changed often.

7. The use of the arsenobenzenes as spirillicidal agents constitutes the principal treatment. Their use in injections gives better results than their local application because of deep site of the spirilli in the lesions. Dose of two to three hundredths of a gram, according to the age, will yield a cure in from three to six days, much more quickly than the usual local antispirillar treatment. In several cases intramuscular injections of sulfarsenol have been employed. Since the in-

fection sometimes recurs it is better in the more serious cases to continue the injections for ten to fifteen days after the cure.

—*Transl. by G. H.*

207—Gerson: **Les stomatites mercurielle et bismuthiques. Leur traitement par la trypaflavine.** Mercurial and bismuthic stomatites. Their treatment with trypaflavine, in Jour. de Med. de Paris, Mar. 29, 1934. Abst. in: Revue de Stomatol., 548. 1934.

Gerson has studied the successful effects of trypaflavine in the treatment of bismuthic stomatitis. He does not believe that its action is a local antiseptic one or antiseptic by a humoral path. He believes that trypaflavine, which is a vital colorant, i. e., can impregnate the tissues without injuring them, acts by stimulating the properties of the reticuloendothelial system.

—*Transl. by G. H.*

208—Hirschfeld, Isador, D. D. S.: **Periodontal symptoms associated with diabetes,** in: J. of Period., 5(1): 37-46. Jan., 1934.

There are two definite periodontal symptoms associated with diabetes, (1) acute gingival abscess, and (2) pedunculated proliferations or polyps that protrude from under an abnormally heavy, usually unbroken, marginal gingiva, which they force away from the tooth surface. They may be seen in nondiabetics as well.

Gingival abscesses may occur singly, or in larger amounts and may occur in upper or lower jaw, also in the anterior or posterior regions of the mouth.

"The subgingival proliferations are, as a rule, either salmon, brick, old rose, and in some instances bright red, in color. Protruding from under the gingival margin, they tend to push the gum away from the neck of the tooth, thus producing the appearance of a marked gingival hypertrophy. Clinically, the proliferations simulate those of pregnancy perhaps more than any other clinical entity but they may be differentiated as follows: in the latter, the polypoid tissue is more likely to be pedunculated rather than sessile; is less likely to force the gum away from the tooth surface; is more often localized interproximally and the gingival margin is more apt to be frayed, producing a sort of dog-eared effect; besides there is the associated history of pregnancy."

Seven case histories are given and sixteen excellent illustrations of the above conditions.

209—Lapine: **Étude clinique des stomatites de la leucemie aigue.** Stomatitis in acute leukemia. These de Paris, 1933, 71 pages. Abst. in: La Revue de Stomatol., 59. 1934.

Stomatitis, a principal symptom of acute leukemia, may be the first symptom. It presents many aspects, more or less intriguing. One may single out three basic types: pseudoscorbutic, ulcero-necrotic and hemorrhagic. More rarely, one observes noma or ulceromembranous stomatitis.

There is a discrepancy between the local symptoms and the seriousness of the general condition. This last element must always be to think of the leukemia and to proceed to the general and hematological examination.

The proof of a specific etiologic agent has not yet been made. Acute leukemia represents the reaction of the blood in the course of a superinfection in an organism in which the blood forming elements have been changed, sensibilized by a previous chronic infectious condition, recognized or not (focal infection). It is therefore necessary in leukemic patients to place the mouth in a healthy condition. The novarsenobenzol treatment is palliative and alleviates the symptoms.

Eight cases are cited.

—*Transl. by G. H.*

210—Laugier, Dr. B.: **Stomatites et leucemies aigues.** Stomatitis and acute leukemia, in: Revue de Stomatol., 36: 586-593. 1934.

Stomatitis is sometimes the only sign of acute leukemia and is that period of doubt during which the practitioner waits for other confirming signs of his diagnosis. Oftentimes, the hemapoetic symptoms are missing. Nevertheless, the blood examination is of prime importance. Without it the disease can be easily confused with the banal, diphtheritic, fuso-spirillary and scorbutic stomatites as well as with noma, agranulocytosis and syphilis.

Laugier divides the oral lesions into three types and cites a case describing each. The first type is often marked by an absence of inflammation and has the appearance of a non-infectious, scorbutic stomatitis, out of proportion with the severe fever. There is little dental pain. The second type presents swollen, red gums with blood oozing from the gingiva around the necks of the teeth. The gingivitis is of an ecchymotic and hypertrophic type. The stomatitis later develops an ulcerative and necrotic nature. The third form is rare and difficult to differentiate from the gangrenous stomatites following infectious diseases.

—*G. H.*

211—Lebourg, Dr. L.: **Stomatite arsenicale.** Arsenical stomatitis, in: Semaine Dentaire, 16: 457-466. 1934.

The etiology of arsenical stomatitis is due to the introduction of some form of arsenic into the body. The stomatitis thus produced is an infectious one. The fuso-spirillary organisms are secondary anaerobic invaders. The preponderant bacterial role in arsenical stomatitis is played by the local pyogenous elements of the mouth.

How does the introduction of an arsenical compound cause the infection? The toxic theory is unsuitable since novarsenobenzol may be beneficial to the lesions. To say that arsenic in the saliva disrupts the biologic equilibrium of the mouth and lowers the buccal defense against bacterial invasion may be plausible for mercurial and bismuthic stomatitis but not for the arsenical type. All these explanations are not in harmony with the rarity of the disease.

It is known that injections of novarsenobenzol can reawaken many diverse cutaneous infections or can cause an attack of an infectious disease by biotropic revival of the virulence of a dormant germ carried by the patient. This biotropism may therefore be the most frequent mechanism in stomatitis following the injection of novarsenobenzol. It is not, however, the only plausible mechanism in all cases.

When arsenical stomatitis follows manifestations of intolerance it is possible that the functional disturbance favors buccal infection. In a third type of case stomatitis is accompanied by hematogenic disorders following arsenical treatment.

The author further discusses the symptomatology, diagnosis and treatment of arsenical stomatitis. The desirability of continuing the anti-syphilitic treatment while curing the stomatitis is emphasized. Oxidizing mouth washes, prophylaxis and appropriate vaccines are discussed.

—*G. H.*

212—Lees, David: **Observations on syphilis affecting the oral cavity,** in: D. Record, July, 1934. 325-332.

Out of 9,000 new cases of syphilis in Scotland, 6% are extra-genital and 80% of this latter group occurred in the dental field.

The primary oral chancres may take the form of (a) generalized erythema or mottling of the mucous membrane, (b) mucous patches on the tonsil, palate, gums or mucobuccal fold, (c) moist patches of papules whose base is often surrounded by a pinkish areola. This latter group is at first formative and then destructive. The most common site is the tongue which becomes fissured due to multiple gummata formation. A common accompaniment at this stage is leukoplakia. Syphilitic ulceration of the hard and soft palate is next in order of frequency.

In congenital syphilis, the teeth may be affected in two ways, (a) by a retardation of the evolution and eruption of the teeth, and (b) by causing characteristic malformations in the permanent teeth.

Since syphilis gives rise to oral manifestations at all stages, the dental surgeon should be able to recognize these in a patient so as to avoid infection; advise the patient to consult a physician; avoid carrying the infection to other patients.

Dentists should know the prophylactic measures which can prevent contagion especially to prevent infection of the hands. In the treatment of syphilis, the advice and cooperation of a dentist in attaining a healthy mouth, would avoid many of the after effects from the administration of salvarsan, bismuth and mercury.

213—Merrifield, Frederick W., D. D. S., M. D.: **Diseases of the mouth,** in: J. of Periodontology, 5(1): 7-15. Jan., 1934.

A discussion of the various types of ulcers that may present themselves upon the mucous membranes of the mouth.

Ulcers:

1) of traumatic or non-specific pyogenic origin;
2) of specific origin;
3) malignant ulcers.

Traumatic ulcers may occur as the result of any form of surface irritation, e. g., chemical, thermal, mechanical or infective. These ulcers respond readily to treatment upon removal of the cause and the use of soothing mouth washes.

Of infective ulcers, specific origin, luetic lesions, tuberculous ulcers, and Vincent's infection are most common. Luetic ulcers are differentially diagnosed from herpes by the latter's characteristic grouped vesicles which rupture, leaving painful excoriations, and from epithelioma, where the border is hard nodular and waxy, the base indurated. "The chief characteristics of a chancre are indurated base, sharply circumscribed borders, dense hardness resembling cartilage, and indolence."

Ulcers of common occurrence on the tongue are syphilitic lesions, tubercular lesions, and those of carcinomatic origin. Ulcers of the tongue may also occur in actinomycosis and in leukoplakic fissures.

214—Meyer and Lankhout: **Stomatitte cancerigene provoquees par des obturations dentaire.** Cancerigenous stomatitis provoked by dental fillings, in: La Revue de Stomatol., 36: 157-161. 1934.

The authors present a case of a leukoplasic lesion on the tongue of a woman, 49 years old. A recurrent tongue tumor developed in the course of a few years with leukoplasia and pyorrhea. The correction of several defective amalgam fillings and the removal of a drop of pure mercury found underneath one of the fillings resulted in the total disappearance of the leukoplasia and the cure of the general troubles. The authors consider the gingivitis and faulty fillings as the etiological factors of the leukoplasia and the stomatitis as due to the metallic intoxication.

—*G. H.*

215—Miniere, Dr.: **Danger de l'extraction au cours des stomatites.** Danger of extraction in stomatitis, in: Semaine Dentaire, 16: 239-241. 1934.

Case of a severe stomatitis in a man 55 years of age. The patient complained of diminished appetite and difficulty in swallowing. Two mobile teeth were extracted. That night severe hemorrhage followed. A general gingival hypertrophy was found to exist. Anemia, fever and rapid pulse led to the taking of a blood count which revealed myelogenous leukemia. Death resulted in ten days. The author calls to attention the danger of extraction in stomatitis without a previous careful diagnosis.

—G. H.

216—Pont, A. and Beyssac, P.: **État de la muqueuse buccale dans la maladie de Vaquez.** The buccal mucosa in Vaquez's disease, in: Revue de Stomatol., 36: 16-19. 1934.

The authors present a case of Vaquez's disease. The case is clinically described, especially with reference to the oral symptoms and the blood picture. The patient presented an abnormal reddish-violet coloration of the face and extremities, a tumorous mass on the chest, typical blood count of the disease, violet colored oral mucosa and red bleeding gums. The oral symptoms are often revealed first and therefore the stomatologist should be familiar with them.

—*G. H.*

217—Prunet, Charles: **Cyanure de mercure et stomatites.** Mercuric cyanide and stomatitis. (Marcel Vigne, Paris, 96 pages.) Abst. in: Revue Odontol., 776 p. 1934.

Conclusions from the pharmacodynamic viewpoint:

Mercuric cyanide injected into the veins is rapidly dissociated. The Hg ion is attached to the leucocytes in their role as vectors. Mercuric cyanide possesses a bactericidal and spirillicidal action by virtue of the Hg ion whose elimination via the saliva is constant.

From the clinical viewpoint:

The stomatites of mercuric cyanide are most often benign, erythematous or catarrhal, having no tendency toward the serious forms.

From the pathogenic viewpoint:

We may especially point out in the genesis of these stomatites:

The biotropic action of the medicament acting as the precipitating cause; the local irritation (caries, malocclusion, prosthetic constructions) acting as the favoring cause; finally, the existence of buccal foci whose septicity is the determining cause of the stomatitis.

From the therapeutic viewpoint:

Mercuric cyanide injected intravenously constitutes a preventive treatment for the medicamentous stomatites and permits the detection of latent and unrecognized buccal foci. In the course of the bismuthic stomatitis the treatment with mercuric cyanide injected intravenously permits us to solve the double problem raised by the appearance of the stomatitis:

1. The cure of the stomatitis by the action of mercuric cyanide. 2. The continuation of the antisyphilitic treatment.

In the course of the stomatites of dental origin, in their usual forms resistant to treatment, in young individuals in good health, the intravenous injection of mercuric cyanide leads to a rapid cure of the buccal lesions. In all cases one must associate a general treatment with the local one. The discovery and suppression of the local irritation remains indispensable.

—Transl. by G. H.

218—Query: Burning of tongue and canker sores, in: J. A. M. A., 103(25): 1973. Dec. 22, 1934.

Woman 45 has had painful burning of tongue for four weeks. Examination revealed small grayish patches on each side of tongue. Diagnosis was leukoplakia. There is also burning sensation from small fissures near tip of dorsum. Physical examination was essentially negative except for moderate acidity in mouth and albuminuria and there was subjective improvement following alkaline therapy, one-half strength alkaline aromatic solution. Lately small ulcer has appeared just proximal to leukoplakia. Dentist has removed dental irritants present. Answering as to diagnosis and treatment, it is assumed that there is no inflammation in connection with small fissure, in which case condition is probably a mild form of scrotal tongue and in such congenital malformations burning sensations are likely neurotic. Canker sore will clear up on application of silver nitrate. This may be caused by slight digestive disorder or food sensitization but some have considered these ulcers a form of herpes simplex. Treatment used is excellent. In addition neurotic features should be taken into account and patient not alarmed as to possibility of cancer. Physician can assume responsibility by frequent examinations and prompt detection of tendency to infiltration, when prompt and energetic treatment can be given.

219—Query: Gingivitis in child, in: J. A. M. A., 103(2): 127. July 14, 1934.

Query concerns case of child of 3½ years in whom swelling and ulceration of gums with fever developed suddenly. Examination for Vincent's was negative, and various local antiseptics were tried without benefit, but at times healing took place, or inflammation flared up independent of any treatment. Citrus fruits seem to irritate gingivae. Tongue is always lightly coated, but child is otherwise normal and diet has been good except that he could not tolerate any form of cod liver oil. Inquirer questions whether using same eating utensils as father with bad pyorrhea could be responsible for child's condition.

To this last the reply is of course that pyorrhea could not be transmitted thus. For the rest, without personal examination answer must be speculative. But first oral hygiene should be carefully looked to; then the blood condition, since a granulocytic angina is to be suspected, with a blood picture of reduced leukocytes and low percentage of granulocytes and clinical symptoms of ulcerations in mouth and pharynx, fever and occasional jaundice. When these clues fail allergic etiology should be investigated.

220—Query: Possible tuberculous ulcer of tongue, in: J. A. M. A., 103(24). Dec. 15, 1934.

Inquirer desires advice on treatment of

persistent ulcer on tongue, following slight cut from rough tooth in patient with moderately advanced pulmonary tuberculosis. Answer: The possibility of ulcer being tuberculous makes advisable bacterial examination of smears from floor of ulcer or biopsy on piece of ulcer. If diagnosis is positive, ulcer should be removed by excision or actual cautery. Untreated tubercular ulcers of tongue tend to spread painfully and in later stages offer serious prognosis. Even without positive diagnosis removal of lesions is probably wisest.

221—Roy, Dr. Maurice: **The clinical forms of pyorrhea alveolaris,** in: D. Cosmos, 76(6): 658-665. June, 1934; (9): 981-987. Sept., 1934.

Pyorrhea is classified under the following types:

I. Pyorrhea alveolaris with pockets
  1) Common Form
  2) Hyperemic Form
  3) Ischemic Form

II. Pyorrhea alveolaris without pockets
  1) Absence of local causes
  2) Juvenile atrophy
  3) Pyorrhea without pockets, with looseness of the teeth through laxity of the paradentium.
  4) Deforming pyorrhea.

Pyorrhea alveolaris with pockets, common form, is further divided into three stages: (a) the beginning period; (b) the static period, and (c) the terminal period.

I. The beginning period is almost always unnoticed by the patient and presents a gingivitis, more or less intense and more or less generalized. By pressure on the gum, a very slight mucopurulent oozing may be obtained from the pocket.

II. The static period is characterized by an abundance of tartar and a pronounced gingivitis. A thick yellow pus may be expressed from the necks of the teeth. The period of time in which this stage lasts is variable, may extend over ten, twenty or more years, but always ends with a looseness and displacement of the teeth.

The terminal period is not the same for all of the teeth. At this period, the above phenomena have become aggravated and terminate in complete resorption of the alveolus. The result is extreme mobility, marked sensibility of the teeth, resorption of the gums, and intense suppuration from the pockets.

The hyperemic form is characterized by an intense hyperemia not localized at the gingivo-cervical border of the teeth, without abundant tartaric deposits. This peculiar type of gingivitis is observed principally in young subjects, mainly women. This form is the most difficult to treat.

The ischemic form is characterized by a pale coloration of the gums. The pockets involve only a limited part of the circumference of the tooth. Here is a marked tendency to elongation of the teeth. The treatment gives rapid and favorable results.

III. Pyorrhea alveolaris without pockets. This condition is "always the consequence of the use of a dental powder, paste or soap; it is the first stage of those cuneiform erosions. But the denudation of the root is never accompanied by sensibility, nor by cuneiform erosion, when the brushing is done with a hard brush without any dentifrice whatsoever."

Juvenile atrophy occurs in young subjects and in both sexes. The disease is characterized by alveolo-gingival resorption, uniform and rapid denudation of the roots affecting principally the vestibular surfaces of the teeth. "The disease stops completely at about the eighteenth year, and remains fixed during a great number of years."

Pyorrhea without pockets with looseness of the teeth through laxity of the paradentium is a condition of which little is known.

Deforming pyorrhea is characterized by a slight alveolar resorption, no pockets, insensibility to pain and no pocket or suppuration condition and is most frequently observed in anterior of the mouth.

222—Skosowsky, J.: **Stomatite toxique apiolique.** Toxic apiolic stomatitis, in: Semaine Dentaire, 16: 525-527. 1934.

The author reports a case of apiol poisoning in a woman, 32 years of age. Sialorrhea, ulcero-membranous lesions, violent pain appeared with concomitant hepato-nephritis. Altho the systemic symptoms cleared up, the stomatitis which had appeared first, persisted. The stomatitis persisted until sequestration of the affected parts had taken place. Medication

was of no avail. It is a question whether the stomatitis was secondarily due to the general state or is a manifestation of primitive apiolic intoxication.

—*G. H.*

223—Stroh, R. E.: **Clinical observations on gingivitis gravidarum,** in: Z. Rundsch., 43: 1749-1754. 1934. Abst. in: J. Am. Dent. A., 22: 523. 1935.

Gingivitis gravidarum is an inflammatory reaction of the gingivae occurring during pregnancy and disappearing spontaneously after delivery. All expectant mothers with a history of exudative diathesis suffer from gingivitis gravidarum. When this condition does not undergo a more severe course, a chronic condition does not develop. The occurrence of gingivitis gravidarum appears usually between the fourth and seventh month of pregnancy and disappears from ten to twenty-one days post-partum.

—*N. K. B.*

224—Sturgis, S. H. and Lund, C. C.: **Leukoplakia buccalis and keratosis labialis,** in: New England J. of Medicine. Abst. (abbreviated) in: J. A. M. A., 103(2): 140. July 14, 1934.

From study of 520 cases, authors conclude that these lesions are definitely pre-cancerous. Bad oral hygiene and use of tobacco are almost universal and equally important in etiology of both leukoplakia and keratosis of mouth and lips. Syphilis seems to be significant only when leukoplakia is located on tongue. The location seems to be of no importance in prognosis nor is the duration of the lesion, but size and extent seem definitely to influence the outcome, to judge by cases treated at Huntington Memorial Hospital from 1918 to 1926. Extensive leukoplakias of buccal mucosa do not respond well to irradiation. If condition persists after removal of all irritating factors patient should be kept under observation and electro-surgical excision resorted to at any "suggestive evidence" of cancer.

225—Thesée, M.: **Un cas de stomatite idiosyncrasique.** A case of idiosyncratic stomatitis, in: Revue de Stomatol., 36: 237-238. 1934.

The author cites a case of a violent stomatitis, very painful, consisting of a swollen tongue and a general erythema of the buccal mucosa. Investigation showed the stomatitis to be due to suppositories of amidopyrine which the patient had been taking. Cessation of the suppository treatment resulted in a rapid cure.

—*G. H.*

226—Tochichara, Y.: **Alveolarpyorrhoe bei Leprakranken.** Pyorrhea Alveolaris in leprosy, in: Nippon No Shikai, 13: 165. 1933. Abst. in: Deutsche Z. Wochensch., 37: 906. 1934.

Clinical statistics were taken on 336 cases of pyorrhea alveolaris in lepers, ranging above 16 years in age. Bacteriological investigations were done in 64 cases.

The frequency of pyorrhea in lepers over 16 years of age was 61%. It usually revealed itself in youth, increased with age, and reached its high spot in the forties. The disease was most frequent in the lower anteriors, next in the upper molars and upper anteriors and lastly in the lower molars. No leprosy bacillus can be found in the pus from the alveolus, therefore, it is incorrect to speak of a leprosy pyorrhea alveolaris. The bacteria present are like those in normal people.

—*J. G. O.*

227—Vincent, R.: **Étude pathogenique de la stomatite bismuthique et des stomatites ulcero-membraneuses.** Pathogenic study of bismuthic stomatitis and ulcero-membranous stomatitis, in: Revue Belge de Stomatol., 31: 118-141. 1934.

There are three classic theories concerning the etiology of the medicamentous stomatites; toxic, mechanical and infectious. The author points out the feebleness of these theories. Neither the toxic or mechanical theories adequately explains the infection. Concerning the infectious theory it is to be noted that fuso-spirilli inoculated into the gums has given negative results.

The author has observed cases of vaginal disturbances due to bismuth treatments of an identical nature with the concomitant stomatitis. This explodes the contention that the disease is exclusively a buccal one depending on fuso-spirillar infection and the presence of teeth in a neglected condition. Altho eden-

tulous individuals are free from bismuthic stomatitis the disease has been observed in wearers of dentures around areas of suction.

Bismuth grains accumulate in the summit of the dental papillae, underneath the intact epithelium, and it thus seems that the approach is thru the blood and not the saliva. Bismuth is present in the soluble salt form in the blood and is spontaneously precipitated as the sulfate in the mouth, but not exclusively in the mouth. In the urine the soluble indoxylsulphate may under the influence of bacteria be precipitated as the black sulphate. By a similar process the germs revealed by gingival hemoculture are capable of precipitating bismuth in the gingiva.

The fuso-spirilli are only a secondary infection, the true infection coming by way of the blood. It is produced by the elective elimination in the gingiva of bacteria from distant foci, ordinarily digestive and genital. The anatomical capillary arrangement of the gums predisposes to blood stasis and the accumulation of bacteria.

Concerning therapeutics the author reports that on a vegetable diet it is impossible to induce any bismuthic symptoms in dogs but on adding meat to the diet violent symptoms occurred.

Conclusion:

1. Bismuthic stomatitis is the result of circulatory failure due to precipitation of bismuth sulfate by the action of bacteria on soluble bismuth salts in the blood, a process similar to that in the urine.

2. The state of the teeth, oral hygiene, saliva, tartar, etc., play no etiological role in the disease.

3. The fuso-spirillar infection is secondary.

4. This pathogenic conception may be applied to all the ulcero-membranous stomatites.

5. Similar lesions are produced in bismuthic ulcero-membranous cervico-vaginitis.

6. Gingival hemoculture reveals streptococci and enterococci capable of precipitating bismuth sulfate. The infection is usually via the blood from elective elimination of bacteria from distant foci through the gingiva.

7. The intestinal infection is of prime importance.

8. A strict vegetable diet should be employed in conjunction with local therapy.

9. Vincent reports a new bacterial finding—that strepto-enterococci are capable of sulphurating lead acetate.

—*G. H.*

228—Von Scheitz: **Hoof and mouth disease,** in: Klin Wchnschr. Apr. 28, 1934. Abst. (abbreviated) in: J. A. M. A., 102(25). June, 1934.

Von Scheitz states that human subjects are most readily infected by raw milk. Another mode of infection is contact with a diseased animal. Transmission from man to man is still somewhat doubtful. The incubation period is fairly short in human subjects, lasting as a rule, two or three days. This is followed by the primary blisters and higher fever with general debility. In the second phase, the secondary blisters and aphthae develop with widely different aspects. The mucous membrane is swollen and painful, and salivation occurs. The vesicles and aphthae burst after one or two days and the temperature decreases. The secondary symptoms may take the form of an inflammation of the nails, and cutaneous eruptions may appear. In many instances, the secondary symptoms are rather mild and hardly noticeable. For this reason, the diagnosis must be based mainly on the primary blisters and the typical fever curve. The most frequent complication of hoof and mouth disease is an involvement of the cardiac muscle. The author gives a history of one case which showed the typical double phase and the beneficial effect of intravenous injection of neo-arsphenamine. Electrocardiography revealed a temporary involvement of the cardiac muscle. Vaccination of the guinea-pigs with extract of the aphthae gave positive results. One investigator vaccinated himself with a highly virulent strain four months after an infection and he did not contract the disease again. The author stresses the beneficial effects of neo-arsphenamine. He also found that the application of nupercaine ointment counteracts the pain of the mucous membrane for six or seven hours. Irrigations with a 2 per cent boric acid solution or with camomile tea are helpful in the treatment of the oral symptoms.

229—Wach, E. C.: **Diagnosis of the local causes of paradontal lesions,** in: Illinois D. J., 3: 92-99. 1934.

A brief discussion of the relation of local causes to parodontal lesions.

Among the local factors are included:

1) Occlusion: While slight alterations of force bring about compensatory changes in bone, according to "Wolf's Law of Bone Transformation," excessive occlusal stress causes injury to the parodontal tissues.

2) Abnormal form, uneven wear, uneven planes of marginal ridges of natural teeth often contribute to the lesions.

3) Loss of teeth, especially the lower six year molars.

4) Infections, i. e., Vincents.

5) Deposits of calculus, salivary and serumal.

6) Loss of proximal contact points.

7) Mouth hygiene (poor).

—*S. H. S.*

230—Waiss, S. I., Prof.: **The alkaline reserves of the blood in so-called pyorrhea alveolaris,** in: Dent. Record, 54: 234-239. 1934.

Prof. Waiss believes that the literature of the past 20 years shows abundant proof that pyorrhea alveolaris has its origin in constitutional changes.

Van Noorden considers the disease an early symptom of diabetes.

Weinmann found a lowered specific dynamic action of protein in 90% of his cases of definite alveolar atrophy.

An investigation of the alkaline reserve in the blood of 62 patients with pyorrhea, showed no significant variations from that of the blood of normal healthy people.

—*S. H. S.*

231—Willman, Warren, B. S., D. D. S.: **The clinical course of pyorrhea pocket formation,** in: D. Digest, 40 (6): 194-201. June, 1934.

A detailed description of marginal pyorrhea and of diffuse atrophy of the alveolar bone. Nothing is given which has not been written before on the subject.

232—Yeretsky, Willa, D. D. S.: **Bismuth Stomatitis,** in: J. of Periodontology, 5(1): 74. Jan., 1934.

Bismuth stomatitis is similar to mercury stomatitis. The bismuth lesion presents a more prominent bluish or blackish line. A fetid odor may sometimes precede the pigmentation. An abrasion of some sort is essential for the stomatitis to occur. The onset is very sudden.

This condition responds readily to treatment; home care, curettage, anti-Vincent's treatment should be used.

(f) Treatment

(Continued from Vol. 5(2): 152. July, 1934)

328—Bader, J.: **Essai sur la pathogenie et la therapeutique des stomatites chemiques.** Pathogenesis and therapeutics of the chemical stomatitis, in: Semaine Dentaire: 1435-1446. 1934.

The dental region is more frequently touched by chemotherapic accidents than other mucosal regions by virtue of the fact that it is subject to the most irritations. According to Hulin, paradentosis is produced by a humoral sensitization rendering the epithelium permeable to a local antigenic intrusion. Stomatites may be considered a manifestation of intolerance, i. e., Hulin's allergic pathogenesis of pyorrhea may be applied to the chemical stomatites.

Endocrine troubles, syphilis and tuberculosis create to a certain degree a humoral instability in itself predisposing to accidents from chemotherapy. The chemical agents introduced into the organism form atoxic organo-metallic complexes (micelloides). The micelloides upon encountering a medium strongly ionized, rich in carbon dioxide, inverts its polarity by absorbing HCO_3 ions. Its negativity allows the micelloide to be phagocytosed by the endothelium and histiocytes. The gingiva offer such a medium and this accounts for the selective fixation for the mouth. Thus, the chemical stomatites, according to Bader, are dependent on this notion of micelloidal equilibrium.

The general treatment should have the following aims:

1. To ameliorate the permeability of the normal physiological channels.

2. To facilitate the formation of complexes assuring the functional integrity of the liver.

3. To modify the humoral equilibrium.
4. To favor the elimination and stimulate the anti-toxic processes.

The author claims to have been using electrargerol with success in reducing intolerance to chemical therapeutic agents.

The local treatment is preventive, i. e., removing all irritative factors that may cause the permeability of the epithelium; and desensitization of the mucosa by magnesium hyposulfite mouth washes. In serious cases sclerosing agents such as chlorhydrate of quinine (20%), methylene blue, etc., may be used.

—*G. H.*

329—Baudet, G.: **Cure thermale dans la pyorrhée.** Thermal cure in pyorrhea, in: L'Odontologie, 72: 25-27. 1934.

The author believes that pyorrhea alveolaris is a local affection springing from a particular maladjustment of the general economy. He, therefore, recommends sending pyorrhetic patients to warm water resorts after administering the usual local operative measures. He cites a case where local treatment could not clear up the pyorrhea. A regime of warm water baths at Cauteret, a French resort, in three weeks cleared up the pyorrhetic state and greatly benefited the patient.

—*G. H.*

330—Bergman, Dr. Max and Dr. Konrad Staunig: **Ueber Roentgentherapie der chronischen Gingivitis.** Roentgen-ray therapy of chronic gingivitis, in: Deutsche Z. Wochensch., 37: 219-220. 1934.

Two cases of gingivitis are described which were treated by Roentgen-ray therapy. After 5 months of radiation and mechanical treatment (necessitating, however, only a few visits), both cases are reported completely cured.

—*J. G. O.*

331—Bettman, M., D. M. D.: **Various types of treatment of periodontoclasia,** in: J. Calif. State D. Assn., 10: 226-232. 1934.

Clinically, the large majority of cases of periodontal disease can be prevented or successfully treated by the elimination of the main local factors such as deposits, food impactions, faulty restorations, oral sepsis and occlusal stress. The systemic factor is probably due to a vitamin deficiency.

There are four technics used in the treatment of periodontoclasia, namely, subgingival curettage, the flap operation, modified flap operation and gingivectomy. They all have for their object the elimination of the gingival infection and the obliteration of the pocket. Subgingival curettage involves the least tissue destruction. The use of drugs to be injected into the pocket is to be condemned and will interfere with the repair. Both types of flap operation are described. The modified type results in less tissue destruction.

The author uses conservative curettage and only in rare instances does he resort to surgical interference. Good results are obtained by each method although there is less loss of tissue when subgingival curettage is used. The method of choice is to a large extent dependent upon the skill and training of the operator. Proper home care is essential for no matter how well the case has been treated improper daily care may result in failure.

—*G. H.*

332—Branower, Edmund, D. D. S.: **Combined Zenther and Dunlop method in the treatment of paradentosis or pyorrhea alveolaris,** in: D. Outlook, 21(1): 269-271. Jan., 1934.

Author presents a detailed account of above methods including excellent illustrations.

"Dunlop's method alone can be used in gingival conditions and is especially effective in Vincent's angina or ulcerative stomatitis." This method consists of the use of medicated surgical wax and medicated surgical paste composed of dehydrated boric acid with glycerine and menthol yeast compound, treated with oxygen followed by a wet spray of nonastringent solution of oxymenthiborate. This treatment follows the same careful removal of deposits from root surfaces generally advocated.

333—Caraballo, C. J.: **Periodontal disease and its treatment,** in: Florida D. J. (6): 13. June, 1934.

A presentation of the salient points in the known etiology and treatment of periodontoclasia.

After having recognized the cause or causes, and eliminated or corrected them, there are four main steps in treatment:

1) Obtain a general Roentgenologic survey.
2) Institute thorough prophylaxis.
3) Eliminate pockets.
4) Post-operative care of the case by the patient and dentist.

—S. H. S.

334—Cipes, L. R., D. D. S.: **Bismuth therapy in periodontia,** in: D. Cosmos, 76(6): 697. June, 1934.

The author dips his instrument during subgingival curettage into the following medicament:

Ethylaminobenzoate	grains 10
Acid benzoic	grains 10
Bismuth subgallate	drams 1
Liquor potassium arsenate	drams 1
Oil cassia	minims 5
Glycerin	q. s. a. d. ounces 1

This is found to be highly efficacious.

335—Council of Dental Therapeutics: **Ultra-violet therapy in oral diseases,** in: J. A. M. A., 102(2): 135. Jan. 13, 1934.

The Council on Dental Therapeutics of the American Dental Association was asked to coöperate with the Council on Physical Therapy in investigating claims for ultra-violet therapy because of its odontologic claims. After careful consideration the Council declared that its efficacy had not been established by critical research. Methods used to fix diagnosis, the condition of patient, natural periods of remission and response to other treatments apparently were given no consideration. The Council re-iterates that "no adequately controlled evidence has been presented in advertising matter or descriptive literature to warrant use of ultra-violet radiation in the treatment of oral diseases and conditions."

336—Crane, Arthur B., D. D. S., and Kaplan, Harry, D. D. S.: **The immediate and complete cure of pyorrhea alveolaris and the prevention of recurrence,** in: D. Items of Int., 56: 487-495, 583-598. July and Aug., 1934.

Authors present in the first section of their article a histo-pathological study of pyorrhea alveolaris. Many radiographs are presented describing pyorrhea alveolaris of the "horizontal," "vertical" and "circular" types.

The authors believe the surgical elimination of the disease to be the rational curative measure, but do not, however, believe it is within the realm of the average dental practitioner. A complete description is given of the technic used by them in the surgical elimination of periodontoclasia.

—M. S. W.

337—Dick, Samuel P., D. D. S.: **Bismuth therapy in periodontia,** in: D. Cosmos, 76(7): 801-802. July, 1934.

Correspondence to the editor in which writer doubts the effectiveness of bismuth therapy in the treatment of periodontoclasia.

338—Friedman, B. D., D. D. S.: **The treatment of pyorrhea,** in: Illinois D. J., (4): 155-157. 1934.

The author's recapitulation of the article:

"1. Pyorrhea is not a disease *per se,* and hence drugs have little or no value in its treatment.

"2. Excessive scaling and polishing are of no permanent benefit where there are pockets present.

"3. The only cure for pyorrhea with pocket formations is the application of surgery.

"4. The post-operative care is very important and should originate in the office of the operator.

"5. Reconstructive work, wherever possible, should be of the fixed type."

—S. H. S.

339—Gracey, Clayton H., D. D. S.: **Expediting the resolution of the soft tissue wall of the periodontal pocket,** in: D. Cosmos, 76(12): 1296-1302. Dec., 1934.

The author has found the following medicinal and physical therapeutic measures, used alone or in combination, to be very satis-

factory in expediting the complete biologic resolution of the soft-tissue wall of the average periodontal pocket.

He first uses phenol in the pocket in direct contact with the tissue, and then mechanical packing of the pocket with a palliative and germicidal material; and thirdly, the use of a device specifically designed for the stimulation of the interdental tissues by the patient.

The author presents a detailed account of the method used in applying the phenol, the precautions to be taken, a case report and the use of the drug in prophylaxis.

Iodoform gauze, plus Wonder-pak has been found to be highly efficacious in the packing of pockets.

For mechanical stimulation of the gingivae a new rubber device is used. This instrument is composed of a semi-hard triangular shaped rubber point mounted on a metal handle and can be used in any area of the mouth.

340—Haubach, Dr.: **Die lokale Umstellung des enzundeten Paradentalen Gewebskomplexes.** The local transposition of the inflamed paradental tissue complex, in: Deutsche Z. Wochensch., 36: 934-935. 1933.

In paradentosis the tissues are on the acid side of the neutral point. To change this towards the alkaline side, Dr. Haubach advises two measures, one, intraoral ultra-violet irradiation, the other, the use of a paste to be rubbed into the tissues and peridental pockets. The paste is massaged into the gums at night to allow longer working time. It has a salve basis and contains radioactive metals, the insulin hormone and clear calcium phosphoricum.

The radioactive substances are used for their healing effects on degenerative processes. The calcium is chiefly to alkalinize the inflamed cell tissues. This paste is not a panacea in paradentosis, but it is a valuable adjuvant in the complicated therapy of the disease.

—*J. G. O.*

341—Hecker, I. W.: **Application de l'antivirus Besredka au traitement des lesions de la cavité buccale.** The antivirus of Besredka in the treatment of lesions of the buccal cavity, in: Revue de Stomatol., 36: 594-605. 1934.

Besredka has introduced a biological method of treating buccal lesions. This method consists in provoking the immunity of the still healthy tissues, but in which the germs still can develop. Since microbes have a selective power for certain organs it is useless to immunize the entire organism. The antivirus therefore, is applied by means of compresses, or lotions, directly upon the lesion. The antivirus is more efficacious in acute than in chronic inflammations. A local immunity develops under the action of the antivirus and the germs are more easily phagocytosed.

The antivirus is best made from the patients own culture if possible. It is diluted and given in doses gradually increasing in concentration. The author gives the result of the application of the antivirus in numerous cases of stomatites and abscesses in diabetics as successful. It is pointed out that the antivirus may be used in therapeutic and prophylactic treatment of root canals.

—*G. H.*

342—Heinrich, Dr. E.: **Biologisch gerichtete Paradentosetherapie.** Paradentosis therapy biologically adjusted, in: Z. Rundschau, 43: 213-218. 1934.

For the best treatment of paradentosis, the patient must be classified according to type, such as arthritic, venous, neuropathic, plethoric, and lymphatic constitutions. One of the most pressing problems in paradentosis research, is, according to Dr. Heinrich, the investigation of paradentosis according to these types, and the evolving of an individual therapeutic treatment according to each type of illness and kind of paradentosis. As for example, Dr. Heinrich cites a patient of the plethoric type, suffering from inflamed and bleeding gums. Here blood letting proved of real benefit in the course of the disease, with similar results in other patients of the same constitutional type.

In addition, a greater part of the paradental diseases are attributable to a disturbance of the vegetative nervous system. Paradentosis as an organic ailment is always bound up with mental conflicts. Psychoanalyzation of patients has often helped in the cure of paradentosis symptoms. In this

way we have the possibility of handling and treating, not the paradentosis, but the person suffering from it.

—*J. G. O.*

343—Hirschfeld, Isador, D. D. S.: **Suppurative periodontoclasia: a case of special scientific interest,** in: D. Cosmos, 76(2): 194-203. Feb., 1934.

Case of advanced periodontoclasia in a youth fourteen years of age: The extreme youthfulness and symmetrical distribution of the periodontal destruction indicated systemic factors to be of prime importance etiologically. The boy was of a sickly nature from childhood and suffered from nutritional deficiency.

Only after a period of changed dietary regime and improved general health was any local improvement noted after treatment. The patient received infra-red and ultra-violet therapy, but they did not prove valuable in securing complete elimination of subgingival pus formation.

"Of unusual interest in this case were the changes shown in serial Roentgenographic pictures. The root ends of the lower lateral incisors, which were tilted from their normal position by inflammatory processes, returned, with treatment, to their probable original locations, and an abnormal radiopaque zone of bone circumscribing the mesial root of the lower left first molar cleared up after comparatively little treatment of the involved tooth."

344—Hulin, Charles: **Systematique des formes cliniques des paradentoses et therapeutique medico-chirurgicale de certaines de leurs formes.** System of the clinical forms of the paradentoses and medico-surgical therapeutics of certain of their forms, in: L'Odontologie, 72: 385-408. 1934.

The author divides the paradentoses into two principal clinical forms based on his previously stated etiologic principles:

1. Pyorrhetic paradentosis:

A hyperfunction of the reticulo-endothelial system with a tendency to dyshyperleucocytosis; clinically manifested by anaphylactic intolerance to certain substances such as proteins; and by suppuration.

2. Atrophic paradentosis:

Of a dystrophic character leading to a rapid resorption of the peridental tissues without suppuration. Mixed forms may also exist.

The two principal forms are subdivided into two classes; the cryptulo-pyoclasic (with pockets), and the dystrophic—atrophic (without pockets). The cryptulo-pyoclasic class is divided into two types, congenital and acquired. Each of these types present the following clinical varieties: hypertrophic, hemorrhagic, perforating pockets and lymphatic pockets. The dystrophic-atrophic class is also divided into two types, congenital and acquired, each of which present the following clinical varieties: degenerative, precocious and congenital.

This characteristic lesion of pyorrhetic paradentosis is the pyorrhetic pocket, the types of which Doctor Hulin demonstrates. The therapy advocated is that of deep gingival sclerosis. A detailed description of the solutions injected and the instrumental technic employed is presented with the aid of illustrations.

First, a general desensibilization is brought about by administration of sodium hyposulfite, 10 to 15 grams per day. This is done because of the colloidopathic nature of the disease. Deep sclerosis is next obtained by intragingival injection of one of the sclerosing solutions described. The local operative treatment consists of removing tartar and destroying the pocket by a caustic or by instrumentation.

As soon as the paradental tissues are fixed by the deep sclerosis, recalcification of the alveolar borders is brought about by the administration of calcium salts.

—*G. H.*

345—Johnson, Carl W., D. D. S.: **Drug therapy in periodontal diseases,** in: D. Survey, 10(2): 37-40, 64. Feb., 1934.

Author's findings are the following:

1. In cases of subacute and chronic infections, the use of mild antiseptic drugs plus instrumentation is more effective than instrumentation without the use of drugs.

2. Previous medication of afflicted areas prior to instrumentation is more effective than instrumentation and subsequent medication.

The author concludes from the above observations that the application of antiseptic drugs does have some influence on the progress of periodontal treatment.

The author is continuing his study to determine:

1. "The effect of topically applied antiseptic drugs on individual cell structure, tissue structure, and circulation.

2. "Whether any effects that may be evident are temporary or permanent.

3. "Their effect upon micro-organisms residual within the tissues."

—*M. S. W.*

346—Kaiser, Frank, D. D. S.: **Resumé of all the recognized methods in the treatment of periodontoclasia,** in: British J. D. Science and Prosthesis, 79: 81-88. 1934.

There are four different technics for the elimination of the gingival trench radically: the Carr method of curetting; the flap method, which may be divided into Kirkland's conservative and Zentler's radical technics; the gingival resection methods of Black and Ward; and finally, extraction. The author describes each of these technics, stressing their high points and differentiation. He says, "There are few mouths where one technique is indicated in its entirety, and the ideal is a combination of them all where indicated." The article is a selected one from the Pacific Dental Gazette and Journal.

—*G. H.*

347—Kirkland, Olin, D. D. S.: **Surgical treatment of periodontoclasia,** in: J. Am. Dent. A., 21(1): 105-109. Jan., 1934.

Author believes that there are but three effective measures in the treatment of periodontoclasia: (a) gingivectomy; (b) subgingival curettage, and (c) the flap operation. His method of choice when more than a simple method is indicated is the modified flap operation.

The advantages of the modified flap technic over that of the radical technic are: (1) less extensive flap; thus decreasing traumatization, with its consequent lessening of pain and swelling; (2) "in the radical flap operation healthy bone in close proximity to the diseased area is trimmed to a point parallel to the depth of the lesion; whereas, in the modified flap operation, this healthy bone tissue is conserved and utilized as a matrix to aid in the building of new bone tissue in the process of repair."

348—Lufkin, A. W.: **Drug therapy in periodontia,** in: D. J. of Australia, 6: 509-518. 1934.

Whatever the etiology of pyorrhea one must conclude that there is a force acting to lower the resistance of the supporting oral tissues and that this force is accelerated by contributory exciting causes generally local in nature. Drugs should be used as an adjunct and should not supplant surgical procedures. There are three groups of drugs—those alleviating and controlling pain, bactericides and those which are destructive. Under pre- and post-operative medicaments the opiates, barbiturates, novocain for extensive operations and ethyl amino-benzoate for lighter ones are discussed.

Before any surgical procedures the number as well as the virulence of the oral flora must be reduced. Metaphen, acriflavin, sodium perborate, chromic acid and hydrogen peroxide are all discussed in their use to combat gram negative anaerobes. The dyes such as gentian violet are used to combat the gram positive organisms. Tincture of iodine and 25% silver nitrate, mercuric chloride (1 in 2000) in 50% H_2O_2 solution, arsenicals and bismuth are used as spirocheticides. Intravenous arsenicals are of value in acute Vincent's but they have little effect on the chronic type which is complicated by pocket formation and can be successfully treated only when the pockets are removed.

Whenever one runs into oral infections which do not respond to standard treatment, lues, diphtheria, malignancy or agranulocytosis should be suspected. The destructive medicaments are used to destroy the squamous epithelium which line the pockets and bar their closure. McCall's sodium sulfide solution is effective as such a destructive agent. As a general statement oral medication is more effective when the saliva is kept alkaline.

—*G. H.*

349—Merritt, Arthur H., D. D. S.: Occlusal traumatosis: cause, effect and treatment, in: D. Cosmos, 76(5): 524-531. May, 1934.

The injury produced by occlusal maladjustments are designated as occlusal traumatosis and should be distinguished from the cause of such injury.

The factors which predispose to occlusal traumatosis are: (1) loss of teeth, (2) unequal wear of occlusal planes, (3) malocclusion, (4) periodontal disease, and (5) the eruptive movement of teeth.

The tissues which may become involved in occlusal traumatosis are: (1) the pulp, (2) the pericementum, (3) the alveolar process.

"In the treatment of occlusal traumatosis, three conditions affecting occlusion should be considered: (1) the replacement of lost teeth, (2) the re-establishment and maintenance of periodontal health, and (3) the restoration of occlusal balance as far as that is possible by tooth grinding.

350—Merritt, Arthur H., D. D. S.: Periodontoclasia: etiology and treatment, in: J. Am. Dent. A., 21(2): 255-260. Feb., 1934.

"Periodontoclasia is a disease the chief characteristic of which is destruction of the alveolar process. It is a chronic localized infection which may seriously affect the general health. Its etiology is considered under three heads: (1) systemic disturbance in metabolism; (2) lowered resistance, bringing about an increased susceptibility to infection in the periodontal tissues, and (3) bacteria."

"Treatment consists in correcting (usually through diet) the existing disturbance in nutrition; the stimulation of periodontal circulation through function and artificial massage, and the treatment of the local conditions through instrumentation. The latter is accomplished by either subgingival curettage or by surgical measures. Three different types of surgical procedures are outlined: flap operation, modified flap operation and gum resection. The importance of regular and systematic care of the mouth in post-operative treatment cannot be overemphasized."

351—Merritt, Arthur H., D. D. S.: Is periodontoclasia curable?, in: J. Am. Dent. A., 21(5): 879-880. May, 1934.

Periodontoclasia is a curable disease if one understands that "cure" does not mean a restoration to normal but a return to a healthy condition of the part.

The successive steps in the successful treatment of periodontoclasia are: (1) a careful examination of the entire mouth including special attention to the X-rays, and soft tissues. Inquiry should also be made regarding patients' general health, habits of diet, etc.; (2) simple cases should be treated by subgingival curettage; (3) advanced cases, in which half or more of the alveolar process has been destroyed, resort to surgical measures; (4) the patient should be instructed in proper home care of the mouth.

352—Miller, I. S., D. D. S.: Bismuth therapy in periodontia, in: D. Cosmos, 76(9): 999. Sept., 1934.

Author has found two advantages in the use of spirillicides and oxidizing agents: (1) prevention of post-operative pain and flaring up of tissues after instrumentation; (2) shortening the time necessary to secure complete results by 50 per cent.

353—Miller, S. M., D. D. S.: Periodontal pockets, their significance and treatment, in: N. Y. J. Dentistry, 4: 122-124. 1934.

The article is an abstract from the proceedings of the First District Dental Society. The author is of the opinion that there is no one cause which alone is capable of producing the disease. The balancing of occlusion, gingival massage, and instrumentation usually suffice for local treatment. However, the dentist's responsibility does not end there but includes dietary advice, blood examination and assistance in the discovery of systemic disease such as diabetes, syphilis and tuberculosis.

The rules of choice of the various technics for eliminating the periodontal pocket are:

1. Gingivectomy. Resorted to only on posterior teeth in well kept mouths when bifurcations are involved.

2. Flap operation. Of advantage where access to the pocket can not be obtained by conservative treatment. These include tor-

tuous pockets and those widening at the fundus.

3. Curettage. Procedure of choice because of reattachment, little loss of tissue and little discomfort. In pockets beyond three mms. in depth the application of sodium sulfide as an epithelial solvent is of advantage in producing reattachment.

The author refers to the intimate relationship between the mouth and the entire body; the relationship is a reversible one. Many general diseases, especially blood dyscrasias and dietary deficiencies, show pathognomonic signs in the mouth.

—*G. H.*

354—Murphy, R. H.: **Classification of types in periodontia,** in: Florida D. J. Nov., 1934.

The best service that can be rendered to a patient is a thorough monthly prophylaxis with definite instructions as to home care of the mouth. It takes only a little extra time to re-check the brushing technic and this should be done unless you are fully convinced that the patient is taking excellent care of the mouth. If periodontal lesions are present, full radiographic examination is indicated and should be made without further delay. The value of such a procedure should be explained to the patient. If, after examination, the case can be handled with deep scaling under novocaine, then this method of treatment is advised. If we find hypertrophy of the gum tissues, weepy, lifeless bleeding, with general lowered resistance, then gum resection should be done. The flap operation should be carried out where teeth are very loose with pockets approaching the root ends, where some tissue has been lost, and where deposits are very heavy with a free flow of pus.

We should confine out work with conservative surgery to the anterior portion of the mouth. Nothing back of the bicuspids, and in these areas we use this method when we find deep labial, as well as, deep interproximal pockets. Conservative surgery is necessary in the upper anterior region; gum resection in the upper molar region is advisable. Instead of handling cases according to one set rule or method rather should we make a thorough study of each case to determine which of different methods is indicated in that particular patient.

355—Ottensen, I.: **Behandlung der paradentitis marginalis.** Treatment of paradentitis marginalis, in: Norsk. Tannlaegefor Tid, 43: 262, 1933. Abst., in: Deutsche Z. Wochensch., 37: 636. 1934.

The author sees the cause of many failures in treatment to be in poor collaboration of dentist and physician. Paradentosis caused by systemic conditions cannot be treated locally with any success. In the examination the gingiva surrounding the affected teeth should be looked at very carefully. In paradentosis of an exogenous nature, the gums are hypertrophic, hyperemic and bleed very easily. In the endogenous form, the gums have a pale and flabby appearance, and the calculus deposition is often very slight.

Treatment was instituted on a number of patients. Under local anesthetic, a gingivectomy was done using a lancet shaped instrument, and the tooth was carefully cleaned. The author dipped his instruments into camphorated phenol before use and placed paraffin packs on after treatment. An essential condition is the removal of the previous granulation tissue, for which the author used small excavators. The next day the pocket is painted with 10% silver nitrate. The paraffin packs protect the tooth for some period against thermal shock.

—*J. G. O.*

356—Ottolenghi, R.: **L'Octozonoterapia nella piorrea alveolare.** Oktozontherapie in pyorrhea alveolaris, in: Stomatol., 31: 477. 1933. Abst., in: Deutsche Z. Wochensch., 37: 209. 1934.

Oktozon is a highly concentrated ozone without the harmful products of ozone. The chemical formula is not yet well established, but it must consist of a mixture of various allotropic combinations of oxygen. Its action is oxidizing, cicatrizing, and bactericidal to the highest degree. In pyorrhea alveolaris, 60 c. c. of these gases is injected into the fornix of the gum and into the alveolar pocket for 10 successive days. After two months, another series of 10 treatments is given. The patient does not experience any pain during treatment. In the cases noted a clearcut improvement was noticed after three months.

—*J. G. O.*

357—Radmann, Dr.: **Ueber die Frühbehandlung der Paradentose.** The early treatment of paradentosis, in: Z. Rundsch. 43: 1283-1286. 1934.

Dr. Radmann notes that many cases of incipient or developing paradentosis can be noted before the condition has proceeded very far. Factors tending towards inflammation, such as gingival calculus, should be eliminated carefully to prevent any untoward effects. During the prophylaxis, care must be taken not to injure the tissue any more than is absolutely necessary.

—*J. G. O.*

358—Ray, H. G.: **Surgical treatment of pyorrhea,** in: Illinois D. J., 7: 263-268. July, 1934.

The author discusses definition, diagnosis, etiology and pathological changes of pyorrhea. He does not believe it possible for the peridental membrane to attach itself to the cementum and for the bone to subsequently regenerate. Therefore he recommends eliminating the periodontal pocket by producing physiological recession of the gum tissue down to the point of healthy attachment by prophylaxis, corrective dentistry and massage.

Contra-indications are given for surgical treatment. Eventual success must be aided by co-operation of the patient.

359—Richburg, Alfred G.: **Treatments, dietary consideration and home care in periodontia,** in: Tufts D. Outlook, 7(3): 7-10, 18-19. Nov., 1933.

The prevention and control of periodontal disturbances consists in the avoidance or removal of all local irritants, also in raising the tissue resistance of the parts involved through stimulation of the circulation and other prophylactic procedures, diet, and other systemic measures.

To obtain successful results a balanced diet is essential. A diet containing the following may be called an adequate one: "1st, more extended use of dairy products, 2nd, leafy vegetables, 3rd, vegetables, such as carrots, radishes, onions, etc., as these can be eaten raw, 4th, fruits." The use of fruit juices is also desirable and a certain amount should be taken daily.

360—Roy, M.: **Remplacement par des racines en porcelaine coulée de dents pyorrheiques expulseés sous un bridge.** Replacement of pyorrhetic teeth expelled under a bridge, by roots of cast porcelain, in: L'Odontologie, 72: 77-81. 1934.

Oftentimes dentists are confronted with cases where extensive fixed bridges with several full crowns become loose due to alveolar resorption about the roots of the teeth upon which the crowns are set. Dr. Roy describes such a case. Upon lifting off a bridge which had become mobile, four teeth came along with the crowns due to the fact that there was complete alveolar resorption about their roots, a mark of the last stage of pyorrhea. Dr. Roy then made a moulage with the bridge and the expelled teeth in place. Using the plaster moulage for the root forms and the crowns of the bridge, porcelain reproductions of the expelled teeth were made. The porcelain roots were shortened, rounded off and inserted into the alveolar sockets of the expelled teeth and the bridge seated. The tissues soon grew about the porcelain roots with no ill effects save an initial discomfort. Two years have since elapsed and the bridge is giving good service.

—*G. H.*

361—Sinclair, James A., D. D. S.: **The significance of a complete laboratory report in the classification and treatment of some periodontal cases,** in: J. of Periodontology, 5(1): 47-56. Jan., 1934.

Author presents a most detailed account of the interpretation of laboratory blood findings in the following diseases: anemia secondary to infection, tumors, pregnancy, malaria, syphilis, tuberculosis, agranulocytic angina, and idiopathic anemia with ochlorhydria and microcytosis.

362—Sorrin, Sidney, D. D. S.: **A method of procedure in equalizing distributions of stresses,** in: J. of Periodontology, 5(1): 63-75. Jan., 1934.

The author's purpose in presenting the above article is to simplify the procedure in obtaining equal distribution of stresses in natural dentures. The term traumatogenic occlusion is used throughout the paper, with the idea that it is an occlusion, under biting

pressure which produces an injury in the periodontal tissues in contrast to traumatic occlusion which is a contact relation of the masticatory surfaces of the teeth which is directly the result of trauma.

Traumatogenic occlusions may be classified into the following three groups:

1. Primary—abnormal occlusal factor with normal periodontal factor.
   a. cusp interference in unbalanced occlusion
   b. excessive wear
   c. faulty restorations
   d. dental caries
   e. uneven wear
   f. displacements following extractions
   g. lack of occlusal vents
   h. unaccustomed mastication of extremely hard foods, holding of pipe stems, cigarette holders, biting of thread.

2. Secondary—normal occlusal factor with abnormal periodontal factor.
   a. simple border atrophy of the process
   b. simplex periodontitis
   c. rarefying pericementitis fibrosa

3. Combined—abnormality in both occlusal and periodontal factors.
   a. axial extrusion
   b. lateral drifting
   c. over-eruption

In obtaining proper centric occlusion simultaneous contact of the opposing teeth must be procured, teeth causing food impactions should be relieved, even distribution of stresses is required, sulci or fossae should be deepened or cusps relieved, and correction of centric should be accomplished with no closure of the maxillo-mandibular relation.

In obtaining proper protrusive occlusion one should accomplish ease of motion from centric to protrusive with no interference; "there should be no displacement of the anterior teeth in their sockets as the lower teeth glide over the lingual surfaces of the upper teeth. It is important to note whether the cusps of the bicuspid or molar teeth interfere with this movement. The interfering cusps usually are on teeth that have been tipped either buccally or lingually until one cusp or another has been raised out of position. Establish equal distribution of stresses on anterior teeth from cuspid to cuspid, if possible. Try to procure posterior contact."

In obtaining proper lateral movement it is advisable to procure contact on working and balancing sides. However, the balancing side in some instances cannot be procured.

The proper method of grinding to obtain the above ideal is given in the minutest detail.

363—Vincent, R., and Thomas, I.: Les precipitations intragingivales de sels insolubles de calcium dans le traitement de la pyorrhée. Intragingival precipitation of insoluble calcium salts in the treatment of pyorrhea, in: Revue de Stomatol., 36: 705-729. 1934.

A brief review of views on the pathogenesis of pyorrhea. Pyorrhea is an entero-gingival syndrome, as revealed by the authors' previous work on gingival hemoculture. The gingivo-dental region by virtue of its terminal circulation presents a favorable site for microbes to lodge. The logical treatment, following this pathogenic viewpoint is, therefore, general vaccinotherapy with an autovaccine prepared from the germs isolated by gingival hemoculture. Local treatment of an intragingival nature may then be instituted.

Calcium salts injected intragingivally, in contact with the gingiva, and ligamentary collagen, result in a saturation and a focal condensation of the connective tissue; thus resulting in a mechanical consolidation of pyorrhetic teeth. This collagenous condensation becomes histologically continuous with the perforating fibres of the alveolus and cementum. Furthermore, in many cases the presence of this condensation favorably modifies the alveolar osteolysis.

In searching for suitable calcium salts the authors tried suspensions composed of neutral insoluble calcium salts, pseudo-solutions of colloidal calcium salts, insoluble calcium salts precipitated in vitro, soluble calcium salts and insoluble calcium salts precipitated in vivo. They found that the latter gives the optimal local calcium saturation and that the doses could be regulated. The calcium salts of glucose, levulose and phosphate were found best.

Since the actual work according to the authors themselves is only in the preliminary stages they refrain from giving "more pre-

cise facts on the nature and manufacture of the antiseptic, sclerosing and precipitating solutions employed." They promise a definite report of the solutions in a later work.

—*G. H.*

364—Wallach, Dr. Paul: **Endogene Unstimmung als Heilfaktor des dystrophischen paradentosetyps.** Endogenous changes as a factor in the healing of paradentosis dystrophica, in: Z. Rundsch., 43: 343-348. 1934.

In light of his own experience and that of others, Dr. Wallach recommends the use of Uricedin in cases of paradentosis dystrophica. Uricedin consists of sodium acetate, chloride, sulphate and bicarbonate, tartaric acid, citric acid and an extract of zitronen. The effect is an alkalizing of the blood to counteract the acidic tendencies of the organism.

—*J. G. O.*

365—Walther, Dr. K.: **Klinische und bakteriologische Untersuchungen über Paradentose.** Clinical and bacteriological studies in paradentosis, in: Paradentium, 6: 68-72. 1934. in: Z. Rundsch. 1934.

In the majority of the cases of paradentosis investigated, haemolytic streptococci predominated. In over half of the cases there is a change in the blood picture. As secondary symptoms, erythrocytes may be found in the urine, casts may appear, in a small percentage of cases there may be albuminuria. Through the metamorphosis in the bacterial flora of paradentosis obtained by light therapy, an improvement in the secondary symptoms is obtained and thereby improvement of the general condition.

—*J. G. O.*

366—Williams, Dr. J.: **Periodontal treatment,** in: Florida D. J., 2: 3-7, 1934.

In the treatment of pyorrhea, the first consideration is the elimination of all pockets. The author outlines and approves of the root curettage methods of treatment. He claims that drugs, vaccines or inoculation are of no specific value in treatment.

While acute cases of Vincent's infection are readily recognized, many cases of the subacute and chronic conditions pass by unsuspected and untreated. Diagnoses in these cases are best made by correct reading of the clinical signs and not by microscopy.

Where a condition of Vincent's infection is even vaguely suspected, anti-Vincent treatment should be instituted immediately.

—*S. H. S.*

367—Query: **Aphthae resistentiae.** J. A. M. A., 103(16): Oct. 20, 1934.

Inquirer asks for advice on treating case of chronic aphthae or periadenitis mucosa necrotia recurrens in a woman of 25 with case of 15 years duration. One child a brother, the father and grandmother have the disease. Patient gives history of rheumatic fever and St. Vitus dance. Answer: This disease, aphthae resistentiae is difficult to treat, sometimes clearing spontaneously as well as with treatment but usually recurring. Arsenic seems the most satisfactory drug to use. Howard Fox recommends Roentgen-ray therapy. Sutton used hygienic measures such as, outdoor sleeping, light exercise, easily digested, nourishing food, with cod liver oil, iron and arsenic, to which latter drug much of benefit is attributed. The disease is familial with a nervous element and mild lesions resemble canker sores, but its connection with and the significance of resemblance to tuberculids has not been determined.

368—Query: **Pemphigus in mouth.** J. A. M. A., 102(8): 639. Feb. 24, 1934.

Inquiry regards woman 61 with condition diagnosed as pemphigus. Bullae have been recurring on hard palate for five months but none have been found elsewhere, on skin or vagina. Patient has no teeth or retained roots; sinuses negative. Treatment has been high caloric, high vitamin diet, calcium gluconate and viosterol daily and sodium cacodylate every other day, without benefit. Answering, doubtfulness of prognosis is stressed. Diet used is approved and in addition, sodium chloride should be excluded from diet. Alkalization, arsphenamine and the like must be used cautiously in these cases when the blood pressure is high. Quinine, pushed to physiologic maximum, sometimes helps, also high colonic lavage. Spontaneous improvement for a longer or shorter time is to be expected so optimism as to results of treatment should be withheld until all possibility of recurrence is past.

(g) Home Care and Prophylaxis

(Continued from Vol. 5(2): 153. July, 1934)

55—Andre, Camile: **Soap in dentifrices, a chemical poison to the gums and teeth,** in: Province Dentaire, Lyon, 20: 79-90. March-April, 1934. Abst. in: D. Cosmos, 76(9): 1005. Sept., 1934.

The author makes a study of the action of Marseilles' soap upon the gums and teeth. Marseilles' soap is made of pure olive oil, and has the property of double neutrality, being chemically and physiologically neutral.

Formerly, before the era of transportation facilities or rapid transit all arts and industries obtained soap only from their regional products; but nowadays many substitutions of cheaper material have been introduced in manufacture.

Soap is obtained from a neutral combination of a fatty acid with an alkali, in this case soda. The action of soap on the skin and on the mucous membranes is quite distinct.

Naeslund has discovered the hydrolytic phenomena which, when it starts in the mouth, liberates its caustic soda component. This hydrolytic action is constant for all brands of soaps, varying greatly according to different causes, among these being the nature of the oils employed; it is greater in the soaps made from linseed oil and from "Arachis"[1] than in those made from olive or from almond oils, and still greater yet than in those made from copra;[2] the potash soaps are more sensible than those made from soda; the hydrolysis increases in ratio with the temperature, being greater at 40° C., which is the tepid temperature used for mouth washing, than at ordinary atmospheric temperature; while alcohol; glycerin, the alkaline salts, etc., have a retarding action, this property is not sufficiently active to allow them to be used in the composition of dentifrices.

The chemical action of the soaps is upon the secretions, making them lose their viscosity and their adhesiveness; upon the epithelial elements of the mucosa by laying bare the albuminoid molecules of their cells, which are then destroyed. With the destruction of the gingival line, the cementum is exposed, and the caustic action is then concentrated upon this portion of the neck of the tooth.

According to Roy, the action of soap extends itself to the bristles of the brush, softening and destroying them.

Soap, being an industrial product and not a pharmacal preparation, cannot be duly controlled.

The author's conclusions are that soap is not neutral to the mucous membranes nor to the organic elements of the teeth. That the correctives added to dentifrices have a very doubtful action as such. That the action develops very slowly and, finally, that the generated caustic action from the hydrolysis phenomenon is responsible to a great extent for the destruction of the gums and the cemental portion of the teeth.

[1]"Arachis hypogoea", or groundnut oil, a fixed oil expressed from the embryo of the seed of the peanut, resembling olive oil in general properties, and for which it is often substituted.

[2]Cocoa oil is expressed from the dried and crushed kernel of the cocoanut.

—Copy.

56—Badanes, Dr. Bernhard B.: **Dentifrices as an aid in the prevention of dental disorders and in the preservation of children's teeth,** in: D. Cosmos, 76: 761-771. 1934.

Dr. Black's findings are cited, that globulins are the main constituents of the plaques and films formed on the teeth. The mechanical cleansing of teeth is a great help in preventing dental diseases caused by caries, and the accretion of deposits on the teeth. The alkalinity or acidity of a dentifrice is of no importance in this regard. Oxalic acid, an intermediary product in the lacteous fermentation of carbohydrates and other substances, although in minute quantities, dissolves enamel much faster than lactic or other organic acids. Soluble calcium salts, when present in a dentifrice and used often in the mouth, may impair the capillary circulation of the gums, leading to local tissue changes. Deciduous teeth are much harder to repair than the permanent teeth, but much can be accomplished in saving and preserving these teeth by appropriate prophylactic measures when instituted in time. Suggestions are brought forward for improvements in dentifrices, both as regards their ingredients and their physical form.

—J. G. O.

57—Findeisen, Dr. Hans H.: Therapeutische Beeinflussung von Gingivitis und Paradentose durch Stark-Jod-Kaliklora. The influence of Stark-Jod-Kaliklora on gingivitis and paradentosis, in: Z. Rundsch., 43: 475-482. 1934.

The author notes the work of Neumann, Rosteck, and Hentze in proving the value of an iodine-containing tooth paste. Müller-Stade found 18-20% loss of iodine in the rinsings after tooth brushing, and concluded this to be absorbed by the mucosa. Seel, painting the Stark-Jod paste on the gums of animals, found a certain amount of absorption of the iodine by the tissues. The author does not know of any case of iodine poisoning caused by absorption from this iodine tooth paste.

Dr. Findeisen cites a number of representative cases from his clinical studies. With most patients, he used Stark-Jod-Kaliklora paste; with 14, however, he used two other iodine containing pastes, Lacalut-lactic acid tooth paste, and Everon-Zahnpflanzencreme. In all cases of gingivitis treated by these, there either was complete healing or evident betterment. In cases of paradentosis, there was tightening of loosened teeth. However, with Lacalut and Everon, there was only local improvement, while with Stark-Jod-Kaliklora, there was a general improvement. In a number of cases, the action of the paste was through the absorption of iodine and its effect on internal secretions. In most cases, however, the only effect is a local one due to its disinfecting action.

—*J. G. O.*

58—Hirschfeld, Isador, D. D. S.: The toothbrush, its use and abuse, in: D. Items of Int., 56: 159-172. Mar., 1934.

"Traumatization of the soft tissues by the toothbrush."

(The above is the title of one of the chapters in Doctor Hirschfeld's book which is at present running in serial form in the above dental journal.)

Some of the common methods of inducing injury in toothbrush manipulation are by: (1) use of a long, brisk stroke; (2) use of excessive pressure on the parodontium; (3) faulty sequence in the brushing procedure; (4) prolonged brushing in an habitually favored area; (5) forcing of bristles into the subgingival crevice.

"It is evident that the early recognition of the incipient stage of toothbrushing recession, leading to the early correction of the traumatizing brushing, should prove advantageous. Briefly, such symptoms may be described as follows:

1. Exposure to the probe of the amellocemental junction immediately beyond the gingival margin.

2. Exposure of same to view, at or right near, the gingival margin.

3. In some adolescents or young adults, whose crowns frequently remain covered by the gingiva to an abnormal extent, the teeth that are affected by the traumatizing action of the brush may be identified through the comparatively greater exposure of the cervical part of the crown; the upper left incisors and cuspid are most apt to be so affected. In such an instance, although the neck of the affected tooth remains covered, a comparison of the length of its crown with that of its mate on the other side, suggests a degree of recession.

4. A non-pathologic gingival cleft.

5. A non-pathologic gingival festoon."

(Same topic continued by author, in: D. Items of Int., 56: 407-418. June, 1934.)

Abnormalities of the tooth surface induced by the toothbrush.

The author has taken a great deal of his material for this chapter from the works of D. W. Miller and has adhered closely to his definitions. The works of G. V. Black are frequently referred to by the author.

The following are definitions of words to be used frequently:

"Wasting"—is used in a collective sense to designate any kind of slow and gradual loss of tooth substance, characterized by a smooth, polished surface without reference to the cause of such loss.

'Erosion—refers to the superficial chemical disintegration of tooth substance.

'Abrasion—is a slow and gradual wasting away of tooth tissue by friction.

'Attrition—(to wear away by rubbing together) designates the particular condition in which abrasion is produced by the rubbing of teeth upon each other in mastication, etc.

'Wedge shaped defect, is a wasting away

of the tooth at the neck, very often taking a form as though produced by a three cornered file. In other words, wasting produced by mechanical agents is *abrasion;* by chemical agents, *erosion;* by mechanical and chemical agents combined, *chemico-abrasion.*"

Abrasions may take any of the following forms: (1) wedge shape; (2) dish-shape; (3) flattened; (4) irregular and (5) figured areas. The wedge shaped defect is found in the cervical part of the root, the others are located on the crown.

The following are factors that influence the type of wasting: (1) the position of the tooth in its bucco-lingual relationship to the arch; (2) the extent of root denudation; (3) irregularities in the structural quality of certain areas of enamel; (4) habitual brushing method.

—*M. S. W.*

(Same topic continued in: D. Items of Int., *56*: 892-896. Nov., 1934.)

Etiology of *wasting.*

Briefly, the causes of *wasting* may be summarized as follows:

1) the toothbrush in conjunction with tooth powder
2) wasting of the lingual surface of incisors and canines by friction of artificial plates, or clasps
3) coarse foods
4) vapors of powerful acids
5) excessive use of citrous foods

—*M. S. W.*

(Same topic continued by author, in: D. Items of Int., *56*: 952-960. Dec., 1934.)

Abnormalities of the tooth surface induced by the toothbrush.

"The toothbrush is the predominating mechanical factor in the production of most wastings." Those teeth which are buccally located in the arch show a larger degree of wasting than those that are not. When a tooth is missing, a defect in the side of the space of the tooth missing is most accentuated because it is more exposed to the brush action. Horizontal brushing is more detrimental than any other type of poor brushing technic.

—*M. S. W.*

59—Jelly, Harry A., D. D. S.: **Toothbrushing methods,** in: D. Cosmos, 76(3): 382. Mar., 1934.

Letter to the editor discussing the origin of the "every-other-row" brush.

(h) Vincent's Infection

(Continued from Vol 5(2): 156. July, 1934)

181—Ball, Edward L., D. D. S.: **Acute and chronic Vincent's infection,** in: D. Digest, 40: 232-233. 1934.

Case history is cited of a patient suffering from an acute attack of Vincent's infection. Treatment was instituted for the establishment of good hygiene in the mouth. After acute symptoms had subsided a diagnosis of chronic Vincent's was made. This was treated surgically. Instructions as to daily home care were given and rapid recovery ensued.

—*J. G. O.*

182—Beach, J. Wright: **Trench (?) mouth,** in: D. Cosmos, 76(11): 1217. Nov., 1934.

Correspondence to editor requesting differentiation between trench mouth and Vincent's infection.

183—Beliard, Vilensky and Prunet: **Some observations on the treatment of ulcerous stomatitis having a dental etiology, by intravenous injections of cyanide of mercury,** in: Revue de Stomatol., 36: 289-293. May, 1934. Abst. in: D. Cosmos, 76(8): 903. 1934.

The authors have had great success with the use of an intravenous injection of 1 cg. of cyanide of mercury in daily application for the treatment of Vincent's infection.

In their first case, the patient had an extensive adenopathy, very fetid breath, and a very extensive buccal and palatal ulceration; trichloracetic acid, hydrogen peroxide and methylene-blue treatment failed. The case was cured with seven injections by daily administration.

In a second patient who was undergoing antisyphilitic treatment, the examination showed the fusospirillar symbiosis; here three injections brought a cure.

In some cases the authors have injected every other day. They have observed that when a stomatitis ulcerosa is accompanied by the eruption of the third molar, the

cyanide exacerbates the disturbances caused by the difficult eruption of the tooth.

All the patients treated with this drug were syphilitics.

—*Copy.*

184—Blanquie, Raoul H., D. D. S.: **The treatment of Vincent's infection,** in: D. Cosmos, 76(12): 1302-1305. Dec., 1934.

The various methods and medicaments used in the treatment of Vincent's infection are discussed as well as the principle of employment of such drugs. The infection when occurring without systemic complications is considered to be purely a dental problem and when complicated with systemic disturbances, to be a joint medico-dental problem.

The acute symptoms of the infection appear to respond well to a variety of drugs used, thereby precluding any one drug as a specific. The method of application seems to have an important bearing upon the result of the drug employed.

Coöperation of the patient in the way of mouth care, general health and diet are most important in the course of treatment.

After the acute symptoms have subsided, all irritating and undermining factors of the supporting tissues of the teeth should be removed.

"The final step should be a thorough prophylaxis embracing all the measures that the term implies as related to the subgingival space and the crown of the tooth."

185—Clements, F. H.: **Evidence of a probable relationship between tropical ulcer and Vincent's infection,** in: D. J. Australia, Jan., 1934. Abst. in: J. Am. Dent. A., 21: 729. 1934.

Clements seeks to demonstrate a relationship between tropical ulcers which are indigenous to humid tropical areas (appearing over the tibia), and Vincent's infection. The ulcer is phagadenic in character, sloughs and spreads to muscles and bones. Left to itself, it shows small tendency to heal. He admits the absence of some links of comparison so selects the outstanding features.

The similarities are: sudden onset, odor, ready bleeding, effects of age and a similar symbiosis of fusiform bacillus and spirochetes. Also, the pseudo-membrane contains the same bacterial forms which is characteristic of both.

—*N. K. B.*

186—Csernyei, G.: **Spirochete orali nelle infezione periapicali.** Oral spirochetes in periapical infection, in: Stomatol., 31: 814. 1933. Abst. in: Deutsche Z. Wochensch., 37: 468. 1933.

On streak preparations of pus from periapical granulations Csernyei, dyeing with Giemsa and Spirsil, can demonstrate many types of oral spirochetes. Two, especially are found in inflammatory processes at the apex, one called Sp. pyorrhoica Kolle, the other a heretofor undescribed kind of delicate structure, being two turns with the long ends turned back to the same side. The author thinks these oral spirochetes may play the same role in suppuration as the pyogenic cocci. Since their most suitable position for growth is in the depth of the tissues (spirochetes are anaerobic) this may explain their great resistance to antiseptics, for in spite of antiseptic treatment of the root canal, pathologic processes can arise in the periapical bone.

—*J. G. O.*

187—Dalitsch, Walter William, M. D., D. D. S.: **Vincent's stomatitis and related infections,** in: J. Am. Dent. A., 22 (7): 1255-59. July, 1934.

The fusiform bacillus and spirochete have a varied distribution in the body, occurring in both health and disease. Normally, they are found around the teeth, in the lumen of the gastric glands of the stomach, in tonsillar crypts and in the genitalia in both male and female.

"A more varied and widespread distribution of these organisms occurs in disease conditions of a gangrenous and putrid character; namely, ulcero-membranous gingivitis and stomatitis, Vincent's infection, putrid otitis media, lung abscess and putrid bronchitis; also in gangrenous appendicitis, ulcerous carcinoma and gangrenous affections of the genitalia. An association with blood dyscrasias is sometimes seen." The factors which cause these organisms to assume a pathogenic character are: (1) increased virulence of the organism, (2) lowered resistance of the tissues, (3) transplantation of the organism

from a normal location to an unusual region. The mouth and tonsils are frequent foci for distribution of the infection.

188—Geiger, J. C., M. D.: **The public health aspects of Vincent's angina,** in: J. Calif. State D. Assn., 10: 181-183, 201. 1934.

Dr. Geiger presents Vincent's angina from the point of view of a public health problem. The first necessity is a correlation of the clinical and bacteriological findings in the disease so that there may be a reasonable basis for diagnosis and reportings. The next question is whether the disease is of common occurrence and whether it presents epidemic characteristics in families or other closely knit groups. Its mode of spread, if any, must be investigated. Contributions of various workers to the problem of Vincent's infection are mentioned by the author.

Until reliable and thorough clinical, bacteriologic and epidemiologic criteria have been set up, there is no need to regard the disease as reportable.

—*S. H. S.*

189—Hartfall, S. J.: **Monocytosis and agranulopenia in Vincent's infection of the mouth and throat,** in: D. Record, 54: 252-253-254. 1934.

Case record: Vincent's infection of the mouth and pharynx was accompanied by a marked monocytosis in the blood and this was followed by a severe granulopenia. The patient responded to pentose nucleotide therapy and recovered.

The interest of the case lies in the series of unusual changes in the numbers of circulating white cells which accompanied and followed the Vincent's infection of the throat. The monocytosis was present from the earliest moment of examination. The granulopenia which in time followed the monocytosis was unrelated to the most acute phase of the throat infection, in fact it occurred two weeks past the peak. The rapid response to pentose nucleotide therapy may suggest that it was a benign secondary agranulopenia and that spontaneous recovery was about to occur independently.

On four other cases examined the haemic monocytosis was unassociated with any outstanding or distinctive clinical sign or symptom, such as an intense local lesion, local or general glandular disturbance or splenomegaly.

Although the number of cases examined are few for definite conclusions, two suggested are offered.

1) Type of blood response to Vincent's infection may not be specific, but rather a matter of individual response of the affected patient.

2) Some other agent closely associated with Vincent's organisms, or produced in situations where the membranes necrotic inflammation easily develops, is responsible for the lymphomonocytic reaction of the blood.

190—Haverstock, D. D. S., B. Sc.: **"Stomatitis Vincenti,"** in: Oral Health, 23 (10): 383-390. Oct. 1933.

Author gives no original material. Essay covers the etiology, prevention, diagnosis, prognosis and treatment of the disease.

191—Hirschfeld, I.: **Vincent's infection of the mouth,** in: J. Am. Dent. A., May, 1934. Abst., in: D. Outlook; p. 291. 1934.

The author offers the following summary of his paper:

1. The hypertrophic form of Vincent's infection occurs sufficiently often to make the descriptive term "atypical" inadequate and to justify the classification of Vincent's infection into two types, the destructive and the hypertrophic.

2. It has been demonstrated that in the diagnosis of a Vincent's infection, neither a positive or a negative bacterial finding is an absolute guide. A clinical differential diagnosis is, therefore, imperative.

3. A subacute or chronic Vincent's infection is liable to be overlooked in many instances because the objective symptoms are comparatively mild. Hence, a knowledge of individual incipient symptoms, or combinations of such symptoms that point to, or at least are highly suggestive of that infection, is obviously advantageous.

4. Two clinical entities occasionally found associated with Vincent's infection, but which must be differentiated from it, are chemical burn and "hairy tongue." These may be produced by the drugs used in the treatment.

5. Various clinical observations indicate that successful treatment of the disease depends, at least, as much on raising of the general and local resistance, as on attenuation, directly, of the micro-organisms by the drugs employed.

6. In answer to a questionnaire regarding the choice between the topical and intravenous use of arsphenamine in the treatment of Vincent's infection of the throat, a group of outstanding otolaryngologists replied to the effect that, in the usual case, the local application is desirable and sufficient, but that it is well to supplement it by intravenous therapy in more severe and complicated cases. In the experience with the drug reported in treatment of the infection in the mouth, its local use has always sufficed.

192—Kirkpatrick, R. M., and Clements, F. W.: **Diet in relation to Vincent's infection,** in: D. J. Australia, 6: 371-372. 1934.

The authors report that "New Guinea Mouth," a disease attacking New Guinea natives, was found by them to correspond with Vincent's infection. Since the natives cure the disease with large quantities of orange juice (which contains vitamins A, B, B_2, C), the authors experimentally divided 14 natives into four groups and with one control group fed the other three groups yeast extract (vitamin B_2), treated orange juice (vitamin C), and plain orange juice (vitamin B_2 and C). All groups improved. From these results "it appears that the addition of certain vitamins to a known standardized diet such as the natives ate was sufficient without local treatment to produce a definite improvement in the condition of the gums when affected by acute gingivitis." The authors will in the future carry out more work among the natives.

—*G. H.*

193—Puterbaugh, P. G., M. D., D. D. S.: **Vincent's infection,** in: J. Am. Dent. A., 22(11): 1924-1933. Nov., 1934.

The fusiform bacillus and its accompanying spirochete are present in the normal mouth in great numbers and may cause no discomfort; however, for some reason such as a lowered resistance of tissues, they may cause a pathological condition. Common predisposing conditions are avitaminosis, malnutrition, blood dyscrasias and disturbed metabolism. An increased indulgence of cigarette smoking in recent years is in a great measure accountable for the increased prevalence of Vincent's infection.

"The diagnosis of Vincent's infection or gingivitis is based on the presence of the clinical symptoms of the disease and the finding of large numbers of the organisms in smears obtained from the lesions." Patients suffering from diabetes and leukemia are especially prone to Vincent's infection and gingivitis.

Treatment for the disease must continue weeks after all clinical symptoms have disappeared as a prophylaxis against recurrent attacks.

The prognosis of the disease varies, but patients who observe good methods of oral hygiene show a subsidence of acute symptoms in from one to two weeks.

The author has found topical application of seven per cent aqueous solution of chromic acid and the home use of oxidizing agents to be extremely effective in the treatment of Vincent's.

194—Sorrin, Sidney, D. D. S.: **Two Cases: 1—Vincent's infection; 2—Myelogenous Leukemia,** in: J. of Periodontology, 5(1): 79-83. Jan., 1934.

Author presents the first case in order to stress the importance of local treatment in Vincent's infection. He has found intra-venous injections of neo-salvarsan to be insufficient. Improvement is noted with the injection but incomplete; upon the use of local treatment all symptoms disappeared.

The second case stresses the importance of a blood count where the etiology of proliferative gingivitis is indefinite, both for the patient's and dentist's protection.

195—Wilkins, W. T.: **Vincent's infection, with report of a case.** (Copy from J. Am. Dent. A. May, 1934, p. 918) in: J. A. M. A. Dec. 23, 1933.

The patient had recurrent canker sores on the tongue and a chapped lower lip. The ulcer on the tongue disappeared, but the chap on the lip deepened. The submaxillary glands became tender. The lip was dry and parched, the mouth hot. The temperature rose to 102, the pulse to 95. There was no lymphadeno-

pathy except in the neck. The patient was more toxic than the symptoms indicated. During four days after the patient went to bed, toxemia increased. A burning sensation in the epigastrium was accompanied by anorexia and food caused cramps. Canker sores reappeared on the tongue. Smears from lip and gum showed an occasional spirillum such as might be found in a normal mouth. Blood cultures for tularemia, undulant fever and typhoid were negative. The white cell count when the patient went to bed was 7,500. Two days later, it was 8,500; and a week later, 10,200. Twenty-four hours after 0.5 gm. of neo-arsphenamine was administered, the gums and both jaws became swollen and sore. Bleeding ensued. Smears were filled with spirilla and fusiform bacilli. The patient received three doses of neo-arsphenamine intravenously and four doses of bismuth compound intramuscularly during two weeks. Mouth washes of strong sodium perborate and diluted hydrogen peroxide were given. The gums were painted with arsphenamine and bismuth solution three times daily. General symptoms disappeared in four days. The lip was well in ten days. The glands lost their soreness in six days and were not palpable in ten days. The gums looked normal in two weeks. Smears taken from the mouth eight days after the first dose of neo-arsphenamine showed only an occasional spirillum and were negative in three weeks.

196—Wilson, J. H., D. D. S.: **Vincent's disease,** in: D. J. of Australia, (6): 373-380, 636-642. 1934.

Vincent's infection is studied not as a distinct entity unto itself but rather in its relationship to other lesions of the oral mucous membranes. The author presents the original classification by Vincent's infection into 1) pseudomembranous or diphtheroid type and 2) ulcerative type. In addition to this L. Winter and L. V. Hayes of New York have suggested three classes based on clinical and anatomical location: 1) General infection in the oral cavity (cheeks, lips, tongue, etc.) 2) Infection of the gingivae, 3) Infection of the tonsils and posterior part of the palate.

The symptomatology, both subjective and objective is outlined, as is also the etiology, local and systemic. The bacteriological aspects of Vincent's infection are dwelt upon at some length with the ultimate conclusion that "the graver and more acute the infection the greater, morphologically, are the spirochetes and the more significant their virulence."

In regard to transmission, Wilson does not believe the disease is transmissible. Generally practiced modes of treatment are outlined.

—S. *H.* S.

197—Wilson, G. E.: **Acriflavine; some of its uses with special reference to Vincent's angina,** in: D. Record, 54: 225-228. 1934.

Acriflavine is a very potent antiseptic, yet it is comparatively non-irritating to the tissues. It can be taken by the mouth and excreted, partly by the intestines and partly by the kidneys, without causing any irritation. It has a phenol coefficient potentially as high as 800. Its potency is enhanced in the presence of serum.

The author suggests the experimental use in burns, in chronic inflammation at apices of teeth, in gingivitis, Vincent's infection, and as a mouth wash. The author used acriflavine in 12 cases of Vincent's angina with salutary results.

—S. *H.* S.

198—Query: Re. **Vincent's infection of mucous membranes,** in: J. A. M. A., 103(17): Oct. 27, 1934.

"In Vincent's angina, do ulcers develop on any other membranes than the membranes of the mouth and throat? Are the organisms found in cases of infection in the vagina?" Answer quotes many authorities who have repeatedly described Vincent's diseases in other parts of the body, notably in the genitalia of both sexes; and cases of putrid gangrenous abscesses of the lungs and brain are numerous in the literature.

199—Query: Re. **Vincent's infection,** in: J. A. M. A., 102(8): 639. Feb. 24, 1934.

Case is described of man supposed to have had a Vincent's infection in 1926 and treatment at intervals since then. Neoarsphenamine has been administered locally and intravenously but mouth smears remain positive. Impacted and tilted second and third molars are suspected of being obstacles to recovery and inquirer asks whether extraction at this

time is contraindicated, also whether there is any new treatment. Answer expresses doubt of case being Vincent's infection contending that there is no such thing as chronic Vincent's infection, which is "an acute condition with definite and positive clinical symptoms." Then follows list of symptoms generally conceded to be pathognomonic of *acute* Vincent's infection. In any case, query editor says intravenous injections of neoarsphenamine are unjustifiable theoretically or clinically and that the practice has been generally discarded. Present case is probably low grade mixed infection originating in pockets around malposed teeth. Fusiforms and spirochetes almost always demonstrable in such locales are not diagnostic of Vincent's infection and after a few days treatment with local antiseptics extraction is probably safe, with care, only one tooth at a sitting.

Dr. Herman Printz, Philadelphia, Pa., in a letter to the editor, expresses his approval of above advice with regard to intravenous administration of neoarsphenamine.

200—Queries and Minor Notes: Re. Vincent's infection of the month, in: J. A. M. A., 102(17): 1420. Apr. 28, 1934.

Lewis Fox, D. D. S., takes issue with editor's reply in J. A. M. A., Feb. 24, page 639 (Abst. 198 above) and states that majority of dental profession recognize existence of a chronic Vincent's infection and quotes many authorities to this effect: Rosenthal, J. Am. Dent. A., March, 1933; Thompson, J. Am. Dent. A., Aug., 1931, Taylor and Repetto; also Merritt in his work on periodontal diseases. The presence of fusiform bacilli and spirochetes in pockets around third molars does not fully explain continued positive Vincent's smears in patient in question.

H. J. Harris, M. D., offers further criticism as follows: The acute symptoms described are not necessary to a positive diagnosis. Harris agrees that positive smears without other symptoms do not make diagnosis certain but their absence in repeated smears may be definite negative evidence. Further that "intravenous injection of neoarsphenamine has never been justified and has been generally discarded by most experienced in study and treatment of the infection" is an especially controversial statement. Harris has treated more than 400 epidemic cases in which above was the only successful method and apparently specific. In Vincent's infection of tonsils same drugs gave specific benefit in 48 hours. It is reasonable to expect arsenicals to be as nearly specific in these other spirochetic infections as in syphilis and African sleeping sickness.

Reply reviews briefly rise to prominence of this infection from description by Dr. Thomas L. Gilmer, thirty years ago, through war "trench mouth" period to the present time. Cases of acute ulcerous gingivitis or stomatitis may be divided into 1) superficial and easy of access as about the teeth, buccal mucosa and tongue, 2) deep and therefore inaccessible as in tonsils and throat. During the war most popular treatment was arsphenamine and glycerine applied locally; less expensive remedies are used now such as potassium arsenite, sodium perborate, peroxide of hydrogen, 5% chromic acid, acriviolet, etc.; thorough irrigation with physiologic salt solution or iodo-saline to remove microbic materials followed by alkaline H^2O^2 and finally painting with compound tincture of benzoin (slight modification of Gilmer's first treatment in Dental Review No. 20, 1906). Without exception lesions show improvement in 24 hours and heal in a few days. Why recommend more elaborate treatment? Cases have developed while patient was under anti-syphilitic treatment with arsenicals and mercury, mercury having increased gingival irritation and spirochetes become arsenic-fast. Where tonsilar crypts are involved or deep pharyngeal wall, local treatment should be supplemented by arsenicals, and intravenous injections may be advisable. This however is not without its untoward effects and is decidely unsafe to use unless one is prepared to meet emergencies.

201—Query: Re. Vincent's infection. J. A. M. A., 102(2): 149. Jan. 13, 1934.

Correspondent describes case of woman of 45 with Vincent's infection of long standing, diagnosis verified by microscope.

Sodium perborate, scaling and cleaning teeth, removal of crowns and bridges, antiseptic mouth washes and removal from diet of irritating acids had been unsuccessfully tried. Injection of neoarsphenamine was fol-

lowed by violent reaction lasting for days, swelling of lips and face; fever, nausea, weakness, etc., and no benefit. Tartro-quiniobine was used locally and intra-muscularly with unfavorable reaction in injected region and increased soreness of gums, and a week later potassium bismuth tartrate in dextrose with identical reaction. Question is whether this is case of allergy to bismuth as well as to neoarsphenamine. Patient has a nasal allergy of 7 years standing. What further treatment is advised?

Answer: Advice is hazardous without immediate examination of oral lesions and smears. 1) lesion must present well known and oft described clinical characteristics of Vincent's. 2) smear must show great predominance of spirochetes and fusiform bacilli. 3) systemic disorders must be ruled out; scurvy, diabetes which in patients of given age often give rise to swelling, redness, soreness and suppuration of gingival mucosa with alveolar bone destruction; poisoning from lead or bismuth; oral syphilitic manifestations and others.

Diagnosis of Vincent's infection being established, injections may be discontinued and lesions treated locally with sodium perborate in hydrogen dioxide made into paste and packed in pockets for ten minutes every 3 hours followed by irrigations with hydrogen dioxide. Mild laxatives are desirable, soft sustaining diet and extreme caution to prevent infection spreading by towels, cloths, dishes and personal contact. Vigorous local treatment is most effective, for which hospitalization may be necessary. Reaction to bismuth is not uncommon and is not allergic and administration of arsphenamine in syphilis is often followed by acute reactions in mouth and gums. Correspondent is referred to articles in Dental Cosmos Sept., 1933, and in J. Am. Dent. A. for Sept., 1933, by Drs. Belding.

(i) Miscellaneous

(Continued from Vol. 5(2): 164. July, 1934)

119—Ball, Edward L., D. D. S.: **Prescribing for patients in periodontia,** in: J. of Periodontology, 5(1): 75-78. 1934.

The author re-emphasizes the value of prescription writing. In addition to the psychological effect on the patient, one is assured of the patient following the regime desired. In some cases the prescription consists merely of writing instructions to be followed by the patient as regards rest, mouth washes, diet, etc. Dr. Ball concludes with listing a number of representative prescriptions useful to the dentist for administration to patients.

—*J. G. O.*

120—Blanquie, Raoul H., D. D. S.: **Periodontal problems,** in: D. Survey, 10 (7): 37-40. July, 1934.

Article stresses the importance of a complete medical and dental examination in periodontal cases.

—*M. S. W.*

121—Cohen, J. T.: **Tooth paste consciousness,** in: Minneapolis District Journal. Dec., 1934.

It is not consistent with the thinking of a professional man to rest on the easy assumption that "one tooth paste is as good as another" when casual observation indicates that the contrary might be true. The practice of telling the patient that "one product is as good as another" is, in effect, to recommend the most widely and flagrantly advertised or merchandised preparation. In taking this passive stand, the dentist himself has been wrong and has encouraged some of the evils he now seeks to correct. Thoroughly awakened, the influence of organized dentistry to improve a situation which encroaches on the standing of the profession can be made to be a direct and powerful influence, far-reaching in effect. The outright and determined product will bring a sure result. This change, if it is to be brought about, means an unrelenting crusade against a bad and firmly entrenched habit.

—*Copy.*

122—Fleming, W. E., L. D. S., D. D. Sc.: **Primary generalized hypertrophy of the gums,** in: Aust. J. Dent. 38: 6-12. 1934.

Medical and dental literature of the last 10 years records only five cases of reported primary generalized hypertrophy of the gums. The cause is unknown, the hypertrophy usually initiating at the time of eruption, or attempted eruption of the teeth.

Dr. Fleming presents a case observed and treated by himself. The patient was a female, aged seven and one-half. An abnormality of the gums was noticed by the girl's parents when she was an infant. It started at about the time of eruption of the deciduous teeth, added impetus to hypertrophic growth being given by each succeeding tooth.

Family history revealed that the father had a slight degree of hypertrophy, the mother was edentulous but otherwise normal, sister aged three and one-half was normal.

Treatment: Under ether anesthesia the soft tissue masses overlying the teeth and alveolus were excised, including the alveolar margins. Histologically the tissue was shown to be comprised chiefly of wavy bundles of fibrous tissue. There was no leucocytic infiltration. Post-operative treatment involved an attempt to realign the teeth. Five years later the condition returned. At this time radium treatment was attempted and the tissue ceased proliferating.

Treatment is still in progress.

—*S. H. S.*

123—Greeley, P. W.: **Sialolithiasis,** in: J. A. M. A., Review in: J. A. M. A., June 23, 1934. Copy in: J. Am. Dent. A., 1517. Aug., 1934.

Dr. Greeley calls attention to the frequency of calculi and describes their usual forms. The symptomatology varies. Colicky pain may occur periodically. There may be no pain for years. Pain is caused by retention of the saliva. This happens particularly at meals or at sight of food. Marked inflammation may occur. If the duct is occluded long and infection occurs, the swollen mass is painful and tender. Diagnosis is usually easy, but differential diagnosis is often necessary. There may be recurrence.

—*Copy.*

124—McCall, John Oppie, D. D. S.: **The responsibility of the periodontist in the social aspect of dentistry,** in: J. of Periodontology, 5(1): 26-31. Jan., 1934.

The author became convinced through his work at the Murray and Leonie Guggenheim Dental Clinic that further advances in periodontology must be made through the study of those periodontal conditions in the mouths of the young which might be the fore-runners of the mature periodontal disease seen in the mouths of adults. He also believes that caries and periodontal disease are more closely related as regards their underlying etiology than is commonly supposed.

The author has found the following conditions to be true. Gingival disease is quite as common as caries in the mouths of children. Periodontal disease in the advanced stages is extremely rare in children, and when they do occur it is quite superficial in character. "It is rare to find gingival disease in a mouth in which there is no caries. This is at variance with the usual finding with regard to the relationship of these diseases in adult mouths." Localized gingivitis, due to impaction of food, due to loss of contact from proximal caries, was found only in the posterior regions. Another common cause of gingivitis is the loosening of deciduous teeth which are about to be shed. Other causes are lack of function, salivary calculus deposits, the latter seldom produce pockets however, and traumatic occlusion. For the treatment of these conditions, the establishment of mouth cleanliness, the restoration of function and the stimulation of the gingivae by vigorous toothbrush massage are highly efficacious.

Generalized gingivitis is found in those children whose general metabolism of the body is well below par.

125—Merritt, Arthur H., D. D. S.: **Hyperemia of the dental pulp caused by gingival recession,** in: J. of Periodontology, 5(1): 33-36. Jan., 1934.

There are two possible complications resulting from gingival recession, namely, those which give rise to sensitivity to the touch of the toothbrush, finger nail, instruments, etc., and secondly those which are sensitive to thermal changes. The latter is the more serious type.

The symptoms of the latter are pain of an indefinite and intermittent type, a more severe reaction to cold than to heat, exacerbation of symptoms in a recumbent position, no complaint of surface sensitivity though there may be some response to the touch of a steel instrument.

The author presents three case histories.

126—Pont, Dr. A., and Beyssac, P.: **État de la muqueuse buccale dans la maladie de Vaquez.** The buccal mucosa in Vaquez's disease, in: Revue de Stomatol., 36: 16-19. 1934.

Vaquez's disease or polycythemia cyanotica is a rare disease which according to a majority of authors is due to a hyper-hematopoetic activity of bone marrow resulting in a polycythemia and increased hemoglobin count with enlargement of the spleen and liver, and cyanosis. The only previous report of a case of this type from a stomatological point of view was that of Pietkiewicz (1928).

In the case history reported the patient's skin and mucosa were abnormally colored. The skin and gums were red. The buccal mucosa and lips were violet colored as was the pharyngeal region. The case was typical of the disease and the authors present it as a matter of record since the disease has been so rarely reported.

—*G. H.*

127—Spies, W. F., D. D. S.: **Cleaning the teeth,** in: D. Digest, 40(7): 234-239. July, 1934.

Author discusses the result of intensive research on the abrasive qualities of dentifrices. He found that a difference exists in the bases of dentifrices in both paste and powder form. Mineral bases contain crystals that differ in size, shape and hardness, and that the degree of abrasive action is determined by the hardness and shape of the crystals. If these crystals are hard, coarse and sharp edged irritation of the gum tissue and abrasion of the teeth will occur while cleaning the surfaces of the teeth. A reduction in the size of the crystals or if they are combined with other agents, such as soap, the cleansing power is reduced to a minimum.

"A cleansing base for a dentifrice should be non-abrasive not only to the enamel, but to the area at the gingival margin or neck of the tooth; also it should not irritate the gum tissues nor cause recession." This is the ideal for which the dental profession should strive.

128—Stillman, P. R.: **Philosophical approach to periodontia,** in: J. of Periodontology, 5(1): 56-63. Jan., 1934.

The author describes the periodontist's mental approach to his field and states that the latter stops too soon in his perspective.

All effort is usually directed to the immediate pathological lesion and differential diagnosis and takes you from the already arrived at stage of death hopefully back to health. This is wrong. The approach should be further extended than the pathological field into the field of hygiene which embraces all the biologic reactions within the body towards the maintenance of health.

This is just the opposite route to the pathological one.

129—Terraillon, P.: **L'evipan sodique en stomatologie.** Sodium evipan in stomatology, in: L'Odontologie, 72: 668-671. 1934.

The author presents a brief discussion of the use of sodium evipan as a general anesthetic to be used by the dentist. The solution is injected intravenously and almost immediately acts on the patient, inducing a profound sleep with no period of excitation, in twenty seconds. Five c. c. results in a fifteen minute anesthesia. There seems to be no after effects. Use of the drug is contra-indicated in hepatics since the anesthetic is eliminated *via* the liver. Sodium evipan as a general anesthetic must be employed carefully and only in the hands of the experienced.

—*G. H.*

130—Tishler, Benjamin, D. M. D.: **Force as a contributing factor of periodontal pathosis,** in: D. Cosmos, 76(6): 638-642. June, 1934.

Author warns the dentist, particularly the orthodontist to apply force to a tooth with the utmost of discretion. He advises to beware of the pressure of poorly adapted bands, ligatures that are too deeply pushed into the gingival crevices, and arch-wires that press against the labial or lingual gingival surfaces.

131—Weeks, C. B., D. D. S.: **Pulpless teeth and periodontal lesions in the maxilla,** in: Florida D. J., (9): 12-14. 1934.

Dr. Weeks stresses the dangers associated with deep periodontal lesions or pulpless teeth in the maxilla. The proximity of these teeth to the maxillary sinus makes for an increased tendency for antral involvement. The incidence of antrum infection having its source in dental conditions has been variously

stated as ranging from 29 to 90 percent. The author advises the removal of all pulpless teeth that are in close relation to the maxillary sinus.

—*S. H. S.*

132—Williams, Jesse L., D. D. S.: **An embarrassing experience following gum resection,** in: J. of Periodontology 5(1): 78-79. Jan., 1934.

Author presents an interesting incidence in office practice. A gum resection of upper left second and third molars was performed. Usual cement pack was placed above these teeth. The patient's mouth was sprayed with a solution of menthol and boric acid. The patient later came down with a severe ulcerative stomatitis. Patient related a similar incident following a facial treatment in a beauty parlor. Author believed he was dealing with a case of unusual susceptibility to certain drugs.

Editorial: **Medicine Nobel Prize,** in: Contact Point, December, 1934.

"The winners of the Nobel Prize in Medicine for 1934 have called public attention to the modern methods of research, which are seldom single-handed but which involve the co-operation of many specialists. The three winners, Dr. Whipple of Rochester, Drs. Minot and Murphy of Harvard, each played a pivotal role in the conquest of pernicious anemia, which up to now was considered equivalent to a death warrant, for medicine knew of no help, and the patient died slowly in two or three years. The physiologist Whipple had no thought of clinical applications when he made experiments on dogs trying to find out how the body made hemoglobin. The clinician Minot heard of these liver feeding experiments and tried it on some of his patients. Finally when the daily amount of liver to be eaten became too great for some of his patients, Dr. Murphy improved the method by using a liver extract which can be injected at intervals of weeks or months, thereby avoiding the daily diet of liver and reducing greatly the cost of the treatment. Thus all three share equally in the development of a treatment. The next step is now left to the biochemist in determining the active substance, and finally the organic chemist in synthesizing and manufacturing it."

Many of the abstracts in this issue of the Journal have been prepared by George Hillman, Joseph G. Ornstein and Morris S. Weinstein. A considerable number have required translation also. Ed.

FEDERATION DENTAIRE

INTERNATIONALE

IXth INTERNATIONAL

DENTAL CONGRESS

VIENNA

August 2nd–8th, 1936

BOOK REVIEWS

Accepted Dental Remedies: Containing a list of official drugs selected to promote a rational dental materia medica and description of acceptable non-official articles, 1934, by Council on Dental Therapeutics, American Dental Association. Review in: D. Cosmos, p. 85, Jan., 1935.

This valuable contribution to the pharmacology of dentistry comprises a list of the approved preparations available in dental materia medica.

It also contains description, use and chemical composition of practically every drug used in dentistry, with much other valuable pharmacopeial information for the dentist.

The Council on Dental Therapeutics has in this book made an invaluable contribution to a most practical branch of dental practice. While the book claims no individual authorship, we wish to compliment and commend the Secretary of the Council, Dr. Samuel Gordon, on a result which is largely his handiwork.

This book certainly should be in the hands of every practicing dentist, as it contains an immense amount of information in a condensed and readily accessible form most valuable and time-saving to the dentist.

—*Copy.*

Accepted Dental Remedies is a book which periodontists especially find most useful. The information concerning the ingredients of dentifrices and mouth washes with which every dentist should be conversant is presented in a readable, time-saving manner. The "bibliographical index to proprietary and unofficial articles not included in A. D. R." is worth the small cost of the book and no periodontist can afford to be without this up-to-date little volume.—Ed.

Treatment by Diet, by Barborka, Clifford J., B. S., M. S., M. D., D. Sc., F. A. C. P., Department of Medicine, Northwestern University Medical School, Chicago; formerly Consulting Physician, Mayo Clinic. Pages 615. Illustrated. Review in: D. Cosmos, 617, June, 1935. (abbreviated.)

In recent years a vast amount of research has been carried out to investigate the subject of diet. This vast research has stimulated the issue of an enormous amount of publications on the subject of diet and nutrition. It is no doubt difficult for any one seeking information on this subject of diet to select a comprehensive work for reference. Dr. Barborka's book, entitled "Treatment by Diet," will unquestionably be found by all investigators the book which covers almost all aspects of the subject.

The book consists of five parts. The first part deals with "Diet in Health." The second covers the "Application of Dietotherapy." In the third part "Diet in Disease" is discussed in detail under each disease. The fourth part includes the "Routine Hospital Diet." The fifth and last part presents an "Appendix," which includes many practical and useful points of value to the busy practitioner.

It is remarkable and in fact praiseworthy that the author succeeded so well in presenting such a vast amount of valuable information in a volume of this size. The author has purposefully and with good reasons omitted lengthy details and theories commonly met with in the usual textbooks on this subject.

The volume is enhanced by a section dealing with dental caries. Members of the dental profession will find this discussion most interesting, valuable, informative, comprehensive, and up to date.

A useful bibliography covering twenty pages is appended including the writings of the outstanding authorities discussed in the text, which will be found most helpful by those seeking first-hand information from these sources. "Treatment by Diet" has a well-prepared index, and will undoubtedly receive an unusual welcome from the medical and dental profession.

Diagnostisch-therapeutisches Taschenbuch für Zahnärzte. ein leitfaden der Klinik der Erkrankungen der Zähne, der Kiefer und des Mundes. Diagnostic therapeutic pocket-book for dentists. A clinical guide for the diseases of the teeth, of the maxillae and of the mouth. By Greve, Prof. Hermann Christian, Erlangen, Germany. Eleventh Edition, rewritten and enlarged, 12 mo., 259 pages: 1934. Review by A. G. W. in: D. Cosmos, July, 1934. Page 795.

. . . In 1897 Greve wrote and issued the Editio princeps of his work . . . This new, the eleventh, edition, is of course practically a new work from the beginning to the end. Not only the clinical and diagnostic descriptions are up to date, but the materia medica, which is changing continuously, has been entirely revised, and the new and valuable modern therapeutical agents have found their proper places, while, from the old, the reliable agents are the only ones which have not been discarded.

The greatest value of Greve's work lies in the scientific and logical distribution of its contents; being a book whose object is to furnish at a moment's notice, and many a time for the beginner in the hurry of an office consultation, the solution of the dentist's doubt by quick reference . . .

The clinical chapters begin with the pathosis of the teeth, followed by that of paradental alterations, diseases and infections of the soft tissues of the mouth and of the floor of the mouth cavity; then come the salivary glands. This is followed by the pathosis of the bones of the maxillae and that of the temporo-maxillary articulation, the antrum and the accessory sinuses of the nose; finally the diseases of the nerves, and lastly, those of the lips.

The pharmacologic part is quite extensive . . . At the end there is a very long, alphabetically arranged, list of drugs, occupying fifty pages, with the indications for their use, dosage table, etc., having a cross-reference index for the prescriptions and indications that have been recommended in the text part of the work.

A copious alphabetical index at the end of the book is another useful means for a quick reference. Really, the innumerable cross-references, the numberless reference indexes and the remarkable subject matter distribution, together with the descriptions of the most modern clinical and diagnostic knowledge, with the report of the newest and classical therapeutic agents, afford much pleasure in consulting Greve's work.

—*Copy, abbreviated.*

Dental Histology and Embryology. By Theodore B. Beust, M. D., D. D. S. Professor of dental histology and comparative anatomy, School of Dentistry, University of Louisville. Review in: J. Am. Dent. A. p. 1898, Oct., 1934.

This text comprises 158 pages, seventeen of which are devoted to cuts. The illustrations total 147, many of them requiring a half page or more. This suggests the total amount of printed matter. The author states his intent to correlate adequately the microscopic anatomy of the hard tissues with the biologic questions that arise in student minds. The chapter heads follow the customary pattern with the exception of the inclusion of "Post-eruptive Changes in Enamel." Another feature is the chapter devoted to applied histology of enamel or operative dentistry. Beust gives as justification of another book on the subject "an intimate experience with teeth and tooth sections extending over a period of three decades."

—*Copy.*

Dental Pharmacology and Therapeutics. By Blayney, J. R., B. S., D. D. S., M. S., Professor of dental pathology and therapeutics, University of Illinois, College of Dentistry. 1934. Illustrated. 311 pages. Review in: D. Cosmos, July, 1934. p. 796.

This is a concise textbook dealing with dental pharmacology and therapeutics. It is intended to be used as a practical guide rather than as a comprehensive reference work. The description of drugs and their uses is brief and to the point. The student especially will find this book useful both in classroom work and in the laboratory. Toward the end of the book a number of simple laboratory experiments are outlined which, if carried out, will do much to promote a better understanding

of the action of drugs and their application in dental practice. While some may find this an appealing book because of the pithy manner in which it is written, others may find it incomplete or even inadequate. Some drugs which are rather commonly used in dentistry have been omitted; the dental significance of others has not been sufficiently stressed. For example, one looks in vain for even a mere mention of sodium-potassium alloy, sulphuric acid or hydrochloric acid, all of which are commonly used in root-canal therapy. Further, the reviewer is not in agreement with the author that ethyl chloride "has no place in dental work" as a refrigerant anesthetic; and the statement that chromic acid "destroys the Bacillus fusiformis and the spirillum" is somewhat misleading. While this book has its faults, what book has not? The above criticisms are minor; the book has much of real value to recommend it, and many will find it a useful textbook.

—*Copy.*

Diseases of the Mouth and their Treatment. By Prinz, Hermann and Greenbaum, Sigmund S.: Review in J. Am. Dent. A., p. 718, April, 1935.

This book contains 602 pp. and 287 illustrations. The authors are well known in both dentistry and medicine, which assures thoroughness and dependability from the beginning. The purpose of the book is to give a text usable to both dentist and physician. It combines the classroom and clinical experience of many years. The book is rich in reference, the subject matter is well arranged and the text is readable and clear. Its analysis and comprehensiveness and its well organized table of contents and complete index make it a valuable contribution to dental literature.

—*Copy.*

Common Sense in Dentistry (A National Necessity), by Samson, Edward, L. D. S., R. C. S., Eng., With an introduction by Professor W. H. Gilmour, LL. D., M. D., L. D. S. 100 pp. Review in J. Am. Dent. A. p. 1269, July, 1935.

If the author of this book has ever written an uninteresting sentence, we have failed to see it. His various papers in our periodical literature have always been characterized by originality of ideas and a unique approach to the problem in hand. As Professor Gilmour intimates in his introduction to the book, the author employs "a novel but humorously provocative method." Naturally, the book deals with the two major affections that concern the dentist, caries and pyorrhea, and of the latter lesion, Professor Gilmour wisely says: "Yet whether the disease is of systemic or local origin, or both, so far the results of manipulative instrumentation far outweighs the other treatments advocated." The major part of Samson's book consists of a satirical review of most of the current theories of the day, and the author defends his manner of approach by saying: "There is no reason, however, to believe that I have not hit upon the truth because my touch was lighter." Among other theories that are more or less held up to ridicule, he mentions vitamins, and says: "It seemed almost inevitable—a kind of scientific kismet that caries and vitamins should meet" and also: "I dread to think of the causative factors of caries and pyorrhea when we have reached vitamin Z." At least the author compels the reader to think, and his great emphasis is on the apparent futility of our present methods of practice to cope with dental disease. And then he says naively: "The invention of dentures was the mother of the necessity to wear them. It is a thought worth contemplating that a five years' holiday from any form of denture construction might see many more octogenarians using their own teeth—I wonder!" So does the reviewer wonder. The under exaltation of the virtues of artificial dentures in our literature may have something to answer for yet. The author pays his respects to the research worker in the following: "There is nothing a keen researcher cannot prove if he tries hard enough." All through the work, there are sallies of this sort, and the reader is kept constantly entertained. But the major and more serious plea is for an organized effort on the part of our profession, or more pointedly on the part of the government, to see that the cause of dental disease is run down and the condition prevented. Logically enough, mention is made of other scourges of mankind that almost threatened extermination till an organized effort was put forth and the problem solved. Hydrophobia was mentioned in

this connection, and many other species of plagues, with the inference that if these diseases can be prevented, there is no reason why dental disease cannot be brought under control. The work winds up with a most impassioned plea for a right-about-face in methods of approach in attacking the existent problems, and recommends a government inquiry into dental disease, with the proposal to establish a national laboratory of dental research. The book is not only enlightening, but entertaining as well.

—*Copy.*

Food and Health, by Sherman, Henry C., Mitchill Professor of Chemistry, Columbia University, New York. 1934. Pages, 296. Review in: D. Cosmos, p. 512. May, 1935.

While a book on nutrition by Dr. Sherman needs no apology, the author in his preface to "Food and Health" feels constrained, nevertheless, to ask the question, "Why another book about food?" In answering this question he says: "Because the recent advances of our knowledge in this field offer so much that is of interest and importance to the individual reader; and because the writer, having devoted both intensive and extensive study over a fairly long time to the sanitary, the economic and the nutritional aspects of the food problem, believes that it is now possible to summarize the essentials of all three aspects in a sufficiently coördinated way to guide the reader to well-balanced judgments in the daily choice and use of food."

The book is written for the intelligent layman who desires optimal health—"buoyant as distinguished from merely passable health." The various aspects of nutrition are considered from that standpoint. The penalties of a faulty diet are not so much stressed as the means for avoiding them.

A chapter of special interest to dentists is entitled "The Significance of Being Born Calcium-Poor." Other chapters of dental as well as general interest are the following: The Importance of an Intelligent Use of Food; Energy Needs in Childhood and with Advancing Age; The Mineral Elements in Nutrition; and two chapters on vitamins C and D.

Tables of food calories, of foods containing calcium and phosphorus as well as other mineral elements, the vitamin content of a long list of staple foods, and three series of suggested menus are included in the appendices. A selected bibliography of more than two hundred titles of the more important books and papers on nutrition is also included.

—*Copy.*

Necessity for Revising the Common Conception of Focal Infection, by Solis-Cohen, Myer, Review, in: J. A. M. A., April 7, 1934. Copy in: J. Am. Dent. A., p. 1166. June, 1934.

Solis-Cohen says the common conception of focal infection implicates the infected tissue, as the tonsils or teeth, rather than the infecting bacteria. Analogously, the opening and draining of an infected cavity fails of the desired results. He illustrates his point by saying that the removal of infected tonsils does not remove the bacteria. Foci of infection in nasal accessory sinuses are not eliminated by treatment or operation. Nor are foci of the oral cavity eliminated by the exodontist. Residual infected tissue is often overlooked. He points to recoveries following removal of foci and also the disappointments, which are all too numerous. He advises that, before making a diagnosis of focal infection, one must be certain that the condition is not due to allergy, lack of vitamins or endocrine dysfunction. The conception of focal infection should stress the bacterial element. The elimination requires the production of bactericidins and other antibodies to destroy the bacteria and make their toxins harmless.

—*Copy.*

Clinical Pathology of the Jaws, by Thoma, Kurt H. Review in: J. Am. Dent A., p. 175. Jan., 1935.

The author of this text has been well known to the dental profession for a great many years, not only as a teacher but also as a practicing surgeon. The book comprises, in addition to the author's experiences, the results of investigation carried on in the laboratory of oral pathology of the Harvard University Dental School. Thoma notes that the jaws are the "no man's land" of the human body, the physician leaving their dis-

eases to the care of the dentist and the dentist so involved with teeth that he has little experience with disease of the maxilla and mandible. In an endeavor to improve the situation, Thoma constructs a volume of 600 pages and 423 illustrations packed with discussion and case histories, to enable the dentist—or physician, if he is interested—to fit himself for diagnosis and treatment, at least in theory. It is a practicing surgeon's opinion, voiced in a huge volume, of a need in dentistry. It is an attempt to depict on paper what happens "in the flesh" which however well done cannot take the place of seeing, touching, treating the real thing. The book is a fine companion for clinical experience, a background for bedside and chairside observation and understanding.

Lehrbuch der praktischen Chirurgie des Mundes und der Kiefer. Surgery of the Mouth and Jaws, by Wassmund, Martin, Dr. Med., Dr. Med. Dent., Director of the Jaw Station in the Rudolf Virchow Krankenhause, Berlin. Leipzig: Hermann Meusser, 1935. Vol. 1, page 571, illustrations 730. Review in: D. Cosmos, p. 194, Feb., 1935.

This is the first part of a two-volume work on surgery of the mouth and jaws. The subjects included are physiological and pathological development and eruption of the teeth; operative treatment of cysts; root resection; operative removal of teeth, including impacted teeth; replantation, transplantation and implantation of the teeth; gingivitis and stomatitis; surgical treatment of pyorrhea; leukoplakia; surgical treatment of abnormalities of shape of the jaws; suppurative inflammation of the soft tissues; suppurative osteitis and osteomyelitis of the jaws; actinomycosis; mouth manifestations of blood diseases; noma.

Each subject is dealt with in a most comprehensive manner. Various cyst operations and root resections are described in the minutest detail. The chapter on jaw deformities, such as protrusion, retrusion and open-bite, is especially commendable, showing clearly by description of actual cases that much can be done for these unfortunate individuals.

The very numerous illustrations are of equal value with the text. References to the literature abound throughout and at the end of each chapter is an extensive bibliography, which, however, tends to favor native writers and to pass over the work of non-Teutons. This fault has been noticed previously in the works of others. As an exception, it must be noted that just credit has been given to George B. Winter for his outstanding impacted third molar technique.

This is primarily a book for the advanced student and for the specialist in surgery of the mouth and jaws, who will find it of immense value as a practical guide in operative technique. The second volume is awaited eagerly for what the author has to say on fractures, tumors, cleft-lip and palate, among other subjects not mentioned in the present work.

The following extract taken from an old newspaper printed 85 years ago, is important because of its dignified announcement of a plan for contract dentistry, and for its emphasis on focal infection and on dentistry for children. Original in Kells Memorial Library, New Orleans, La.—ED.

THE DAILY REPORTER

Baton Rouge, La., Tuesday Morning, March 5, 1850

ADDRESS:

To the Heads of Families, Guardians, and the Superiors of Institutions

LONG AND PRACTICAL experience prompts us to believe that the teeth of man can be preserved to an advanced age of life, provided he will give them that care and attention which their use and importance demands. It is our object then to reform the state and bad condition of the teeth and remove in a great measure the evils and sufferings of thousands, and more particularly the rising generation.

Our desire is to impress the young with a sense of the worth and usefulness of beautiful and sound teeth, and to accomplish this for the mutual good of all, we propose the following plan, viz:

To open a subscription book by which families can be served throughout the year, having all operations performed appertaining to Dentistry in the most skillful manner for the following prices, viz:

For adults	$15.00
For children from 10 to 16	10.00
For children from 5 to 10	5.00

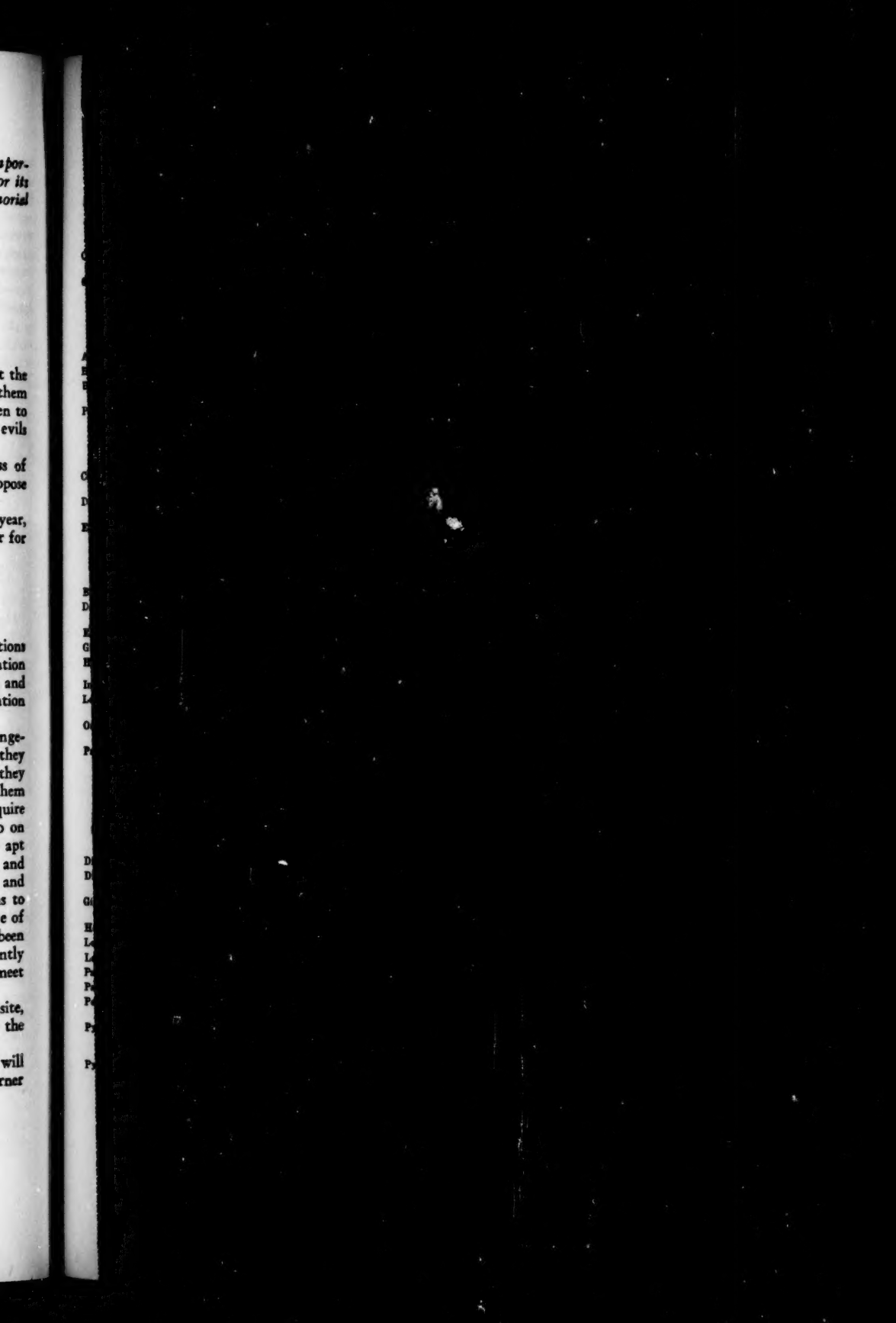
Inserting teeth is an extra charge.

In addition to the above allow us to mention some very important observations which should be brought to your consideration. It is the various periods in the formation of the teeth which require the strictest observance and attention of some experienced and skillful dentist, and those periods in life are first, the infantile disease caused by inattention in teething and to facilitate matters at this critical time of life.

Secondly, to the attention of the loss of the first dentition and the proper arrangement and treatment of the second or permanent set, and thirdly, the treatment they may require in a more advanced time, for the importance of the teeth is such that they deserve our utmost care and attention as well with respect to the preservation of them when in their healthy state, as to the method of curing them when diseased. They require this attention, not only for their preservation as organs useful to the body, but also on account of their intimate connection with other parts, for diseases of the teeth are apt to produce disease in the neighboring parts, frequently of very serious consequences, and there is no doubt but that disease in the mouth often severely affect the constitution, and are conducive to several diseases of the system, in fine many of you may be victims to these sad misfortunes and know too well the miseries of bad teeth, and the importance of of an early and judicious attention to them, and such being the case many have been compelled to neglect them because they could not afford the means for relief, consequently to the advantage of all we now adopt this plan, and do most sincerely hope it will meet your approbation and gain your support.

Being permanently fixed at our office, where we have all the conveniences requisite, and where due attention will be given to all the different branches in dentistry at the shortest notice.

Our subscription book is now open, and all those desirous of subscribing and will engage their families, or single persons by the year will please call at our office, corner of North Boulevard and Third Street.

A. L. PLOUGH & SON.

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